AAQ51543;

```
AX F F X S X X X X X X F F F F
 Query Match
Best Local S
Matches 170
                                                                                                                 The polypeptide induced in macrophages by lipopolysaccharide stimulates cell prolification (esp. when costimulated with IL-4) promote activation, cytotoxicity, and mobilisation of LAK cells; promote recruitment of suppressive peritoneal exudate cells;
                                                           promote generation of immunocompetent lymph node cells (LNC) and have trypanocidal and trypanolytic activity. The human and murin sequences are given in (AAQ51543-45), peptide fragments able to generate antibodies are given in (AAR51951-61) (Updated on 25-MAR-2003 to correct PN field.)
                                                                                                                                                                                                      agent, also
                                                                                                                                                                                                                   New polypeptide induced in macrophage(s) by lipo-polysaccharide useful e.g. as antitumour, antiinflammatory or trypanocidal
                                                                                                                                                                                                                                                                                    Devos
                                                                                                                                                                                                                                                                                                                                                    28-APR-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Macrophage; induced; lipo-polyasaccharide; antiinflammatory; trypanocidal agent; antik
                                            Sequence 3861
                                                                                                                                                                           Claim
                                                                                                                                                                                                                                                      P-PSDB;
                                                                                                                                                                                                                                                                                                                                                                         11-NOV-1993
                                                                                                                                                                                                                                                                                                                                                                                              WO9322437-A1
                                                                                                                                                                                                                                                                                                                                                                                                                             polyA_signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        activation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Lipopolysaccharide induced protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        25-MAR-2003
24-MAY-1994
                                                                                                                                                                                                                                                                                                          (INNO-) INNOGENETICS NV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sapiens
                                                                                                                                                                                                                                                              1993-368796/46.
  170;
                                                                                                                                                                                                                                                                                    ~
                                                                                                                                                                          9
            Similarity
                                                                                                                                                                        Fig.
                                                                                                                                                                                                                                                                                   Fransen L,
                                                                                                                                                                                                          as antitumour, a related nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cytotoxicity;
 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (updated)
(first en
                                                                                                                                                                         1; 108pp;
                                          ВP;
                                                                                                                                                                                                                                                                                                                               92EP-0401231
                                                                                                                                                                                                                                                                                                                                                    93WO-EP01022
                                                                                                                                                                                                                                                                                                                                                                                                                /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                             3841..3846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2907..2995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2615..2846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     note= "Intron 1 is only
                                                                                                                                                                                                                                                                                                                                                                                                                                                              'note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             980..2228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       *tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   810..331
                                          542 A; 1241 C; 1292 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        entry)
         15.1%;
53.1%;
                                                                                                                                                                                                                                                                                    Van De Voorde
                                                                                                                                                                                                                                                                                                                                                                                                                                                            "Intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "Intron 2 is only (represented by (
                                                                                                                                                                        English.
                                                                                                                                                                                                                                                                                                          SA.
                                                                                                                                                                                                                                                                                                                                                                                                                                     "intron 3 is only partially se 
(represented by (N)40 in the 
estimated length ca. 1000 bp"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "intron 1 is only partially sequenced (represented by (N)40 in the sequence estimated length ca. 5400 bp"
                                                                                                                                                                                                                                                                                                                                                                                                                   ው
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              estimated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ds.
0
                                                                                                                                                                                                          acid,
Score 69.2; DB 14;
Pred. No. 0.0015;
0; Mismatches 148;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 agent; antibody; cell
                                                                                                                                                                                                        antibodies, anti-sense
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 gene
                                                                                                                                                                                                                                                                                   Þ
                                                                                                                                                                                                                                                                                    Van
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      partially sequenced (N) 40 in the sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ca.
                                          658 T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              antitumour;
                                                                                                                                                                                                                                                                                   Heuverswyn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              7900
                                          128 other
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             , ď
 Indels
                     Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                             sequenced
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 prolification;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sequence
                                                                                                                                                                                                                                                                                   Ή,
                                                                                    and murine
sable to
                                                                                                                                                                                                         cpds
2
Gaps
```

á

35 CAGCCCCTGGCCTGGCCAGAGGCGCGAGGCCCGAGAGCCCGCTCGGTGGAGACTGGGGGTG

94

regions and

The specification describes antisense oligonucleotides (AAX52869-X55271) directed against at least 2 mRNAs selected from target genes, coding and non-coding regions of RNAs corresponding to target genes, gene initiation codons, genomic flanking regions, intron-exon borders, the 5'-end, the 3'-end and the juxta-section between coding and non-coding

English

all segments of RNAs encoding proteins associated

with one

```
RESULT 14
AAX53491
ID AAX53
Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                      New antisense oligonucleotides used vasoconstriction
                                                                                                                                                                             09-JUN-1998;
17-SEP-1997;
                                                            Disclosure; Page 37; 120pp;
                                                                                                                    WPI; 1999-229400/19
                                                                                                                                       Nyce
                                                                                                                                                                                                           17-SEP-1998;
                                                                                                                                                                                                                                                                     Synthetic
                                                                                                                                                                                                                                                                                         prostate cancer;
                                                                                                                                                                                                                                                                                                           pulmonary hypertension; pulmonary vasoconstriction; emphysema;
chronic obstructive pulmonary disease; leukemia; lymphoma; car
colon cancer; breast cancer; lung cancer; pancreatic cancer;
                                                                                                                                                                                                                                                                                                                                                                                                    Human adenosine Al receptor antisense oligonucleotide fragment.
                                                                                                                                                                                                                                                                                                                                                                                                                        05-JUL-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAX53491
                                                                                                                                                                                                                               25-MAR-1999.
                                                                                                                                                                                                                                                                                                                                                             pulmonary vasoconstriction; inflammation; allergic
                                                                                                                                                                                                                                                                                                                                                                       Antisense oligonucleotide; multiple target; antisense impaired respiration; inflammation; lung disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                           AAX53491;
                                                                                                                                                           (UYEC-) UNIV
                                                                                                                                                                                                                                                  WO9913886-A1
                                                                                                                                                                                                                                                                                                    hepatocellular carcinoma; kidney
                                                                                                                                                                                                                                                                                                                                      acute asthma; allergy; asthma; impeded respiration; respiratory discress syndrome; pain; cystic fibrosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1788
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2086
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2026
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1966
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   standard; DNA; 114955
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GACGCGAGGGGAGGGGGCCGGGCCGGGGTCGCGCGCGCACACTCACCTCCCCTTCCAGC 1967
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAGGTGCCCGGAGCGTACCCAGCGCCGGGAGTACCTCCCGCTCACACCTCGGGCTGCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCCCGGGCGACAGCCGAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCGCGCGCCCCAGGCCGCCCCGCGCC-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGÉACCGGTCGÉTGGAGTACTGÉGCGCGCCGCGCCCAGCAGCCCGGCCAGGAGCAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EAST
                                                                                                                                                                                                                                                                                                                                                                                                                       (first
                                                                                                                                                                              98US-0093972
97US-0059160
                                                                                                                                                                                                            98WO-US19419
                                                                                                                                                            CAROLINA
                                                                                                                                                                                                                                                                                                                                                                                                                       entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  354
                                                                                                                                                                                                                                                                                                                                                                                                                                                               BP.
                                                                                                                                                                                                                                                                                                    cancer; melanoma; hepatic metastasis;
                                                                                                 in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       - GCGCCCCGCATGCTCTGGCGCCGGCTCCGCCG 1789
                                                                                                 treatment
                                                                                                 of,
                                                                                                                                                                                                                                                                                                                                                              rhinitis;
                                                                                                 Φ
                                                                                                                                                                                                                                                                                                                                                                                 treatment;
                                                                                                ġ
                                                                                                pulmonary
                                                                                                                                                                                                                                                                                                                        carcinoma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1907
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2027
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               154
```

```
S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Sim
Matches 156;
                                                                                                                                                                                                                                                                                                                                                                                                ULT 15
252496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              inflammation, including lung diseases, pulmonary assoconstriction, inflammation, allergic rhinitis, acute asthma, allergies, asthma, impeded respiration, respiratory distress syndrome, pain, cystic fibrosis, pulmonary hypertension, pulmonary vasoconstriction, emphysema, chronic obstructive pulmonary disease (COPD), and cancers such as leukemias, lymphomas, carcinomas e.g. colon cancer, breast cancer, lung cancer, pancreatic cancer, hepatocellular carcinoma, kidney cancer melanoma, hepatic metastases, as well as all types of cancers which may metastasize
                                                                                                                                                                                  Human; cytosine methylation; 5'-CpG-3'; uracil; cytosine; diagnosis; drug; side effect; cancer; central nervous system; cardiovascular; gastrointestinal; respiratory system; single nucleotide polymorphism
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               oligonucleotides (specifically AAX55180-271) can be used for the antisense treatment of diseases and conditions. Typical diseases and conditions are those associated with impaired respiration and conditions are those associated with impaired respiration and
                                                                                                                                                                  SNP; cell differentiation;
                                                                                                                                                                                                                                                               Oligonucleotide
                                                                                                                                                                                                                                                                                                                                                                              ABQ52496 standard; DNA; 600 BP
               01-SEP-2001; 2001WO-EP10074
                                                                                                                                                                                                                                                                                                                                            ABQ52496;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              or have metastasized to the lungs, including breast and prostate cancer.
                                                                                           WO200218632-A2
                                                                                                                            Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              may be derived from sequences AAX55272-74.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  108586
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             108526
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        108466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           108826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               108706
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        108646
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ω
u
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TBGGGCCCCSNNNDNNCGGGGGCGGCGGCGCCTGGCTCGCCTBGGGCCCCSNNNDNNG 108883
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGGCGGCGTGGCSNNNDNNGGCGGGGGGGGGCGCGCGTGGSNNNDNNGGCGGGGGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGGAGGTGCCCGGAGCGTACC--CAGCGCCGGGAGTACCTCCCGCTCACACCTCGGGCTG 150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGCGGCGCCTGGCTCSNNNDNNGGCGGGGGGGGGGCGCGCGCGCTGGCTSNNNDNNGGCGGGGG 108525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GECAGCCCCTGGCCTGGCCAGAGGCGGAGGCCGAGAGCCCGCTCGGTGGAGACTGGGGG 92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           114955 BP; 6071 A; 29417 C; 36712 G; 21328 T; 21427 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACATGCGCTGCTCGCCGGAGGCGTCTGGCTGGCGCGCGTCGCTCCTGCACGG 448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCAGGCCCGGGCGACAGCCGAGACGTGGAGCGCGCCCGGCTCGCTGCAGCTCCGGGGACTCA 390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGCGGCGNNNDNNGGCGGGGGCGGSNNNDNNGGCGGGGGCGGCSNNNDNNGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SNNNDNNGGCGGGGGCGCCSNNNDNNGGCGGGGGCGCCGSNNNDNNGGCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGGCGCCTGSNNNDNNGGCGGGGGCGCGGCGCTSNNNDNNGGCGGGGGGCGCGCCCC 108645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAGTTCCCTGGGTGGCCGCGAGACGCTGGCCCGGGCTGGAGGGATGGCGGGGCGGGGAC 210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                               for detecting cytosine methylation SEQ ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                conditions or mixtures.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   15.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          uences AAX55272-74. These multiple target fically AAX55180-271) can be used for the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 68.8; DI
Pred. No. 0.003
33; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .0011
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The antisense oligonucleotides
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 227;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 114955,
                                                                                                                                                                                                                                                               NO 39087.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ..
∵
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           108585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      108705
```

```
This invention describes a novel method for determining the degree of methylation of a particular cytosine in a motif 5'-CpG-3', present in a cytosine (c) genomic sample of DNA. The sample is treated chemically to convert cytosine (c) but not methylated C, to uracil, then part of the genomic DNA that contains the target C is amplified to form a labeled amplicon. The amplicon is hybridised to two classes, each with at least one member, of oligonucleotides and/or peptide-nucleic acid (PNA) oligomers and the degree of hybridisation to both classes is determined from the label on the amplicon. From the ratio of labels hybridised to the two classes of oligomers, the degree of methylation is calculated. The method is used: (1) for diagnosis and/or prognosis of side effects of contexpeutic drugs and of a wide range of diseases, e.g. cancer, disorders of the central nervous, cardiovascular, gastrointestinal and respiratory systems etc., particularly by detecting mutations or single nucleotide polymorphisms (SNP's); and (ii) for differentiation of cell or tissue types and for investigating cell differentiation. The method allows the method for investigating cell differentiation. The method allows the method for of determining the degree of cytosine methylation described in the disclosure of the invention.
                                       5
                                                                                                                밁
                                                                                                                                                                    Ş
                                                                                                                                                                                                                                문
                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                    맑
                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local S
Matches 196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Determining the degree of cytosine methylation in genomic DNA, for diagnosis and prognosis, comprises selective hybridization amplicons from chemically treated DNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 12; 56pp + Sequence Listing; 56pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-SEP-2000; 2000DE-1043826.
05-SEP-2000; 2000DE-1044543.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   the disclosure of the invention.
409
                                                      370
                                                                                                                   349
                                                                                                                                                                       310
                                                                                                                                                                                                                                   289
                                                                                                                                                                                                                                                                                          250
                                                                                                                                                                                                                                                                                                                                                       229
                                                                                                                                                                                                                                                                                                                                                                                                              190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        196;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EPIGENOMICS AG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         600
                                                                                                                                                                                                                                                                                             GGGGCGGGCGGGGGGGGCGCGCCCGGCTCCTTAAAGGCCGCGAGCCGAGCCGAGCGGCGA
                                                                                                                                                                                                                                                                                                                                                                                                          GAGGGATGGCGGGCGGGACGGGGGGGGGGGGGGCTCGTCACGTGGAGAGGCGCGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCCCGCTCACACCTCGGGCTGCAGTTCCCTGGGTGGCCGCGAGACGCTGGCCCGGGCTG
TCGCTGCAGCTCCGGGACTCAACATGCGCTGCTCGCCGGGAGGCGTCTGGC
                                                                                                                                                                                                                                      ев выпускает в праводения по праводения праводен
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Piepenbrock C,
                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         B₽;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         26 A; 51 C; 478 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    14.78;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Berlin K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 67; DB 24;
Pred. No. 0.0048;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         44 T; 1 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Guetig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               German
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            215; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                         420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              useful
of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
```

168

189

108

0

Search completed: September Job time : 271 secs

7,

2003,

13:54:51

408

Human neuronal NAChR alpha7 subunit encoding cDNA

```
RESULT 12
ABS54875
ID ABS54
XX
AC ABS54
XX
                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                  뫄
                                                                                                                                                                                                                           Ś
                                                                                                    밁
                                                                                                                                                    유
                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                           mery Match
                                                                                                                                                                                                                                                                                                                                       substantially free of contamination from many other receptor proteins, are useful for observing the effect of a drug substance on a particular subtype to perform in vitro screening of the drug substance in a test system that is specific for humans. The antibodies can be used in immunochemistry and for diagnostic and therapeutic applications. The present sequence represents a human neuronal NAChR alpha7 subunit
                                                                                                                                                                                                                                                                                                                                                                                                             The invention relates to a suitable host cell transfected with an isolated nucleic acid molecule comprising a sequence of nucleotides ribonucleotides that encodes at least one alpha or beta subunit of human neuronal nicotinic acetylcholine receptor (NAChR). The compos and methods of the present invention, which provide a means to prep synthetic or recombinant receptors and receptor subunits that are
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Cell comprising nucleic acids encoding human alpha and beta subunit neuronal nicotinic acetylcholine receptors, useful for in vitro screening of a drug substance in a test system specific for humans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Examples; Page 129-130; 143pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gillespie A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-NOV-2000; 2000US-0703951
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              29-OCT-2001; 2001WO-US50985
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-AUG-2002
               ABS54875
                                                                                                                                                                                                                                                                                                     Sequence 1876 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2002-698532/75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO200259266-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human; neuronal; immunochemistry;
                                        ABS54875
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (MERI )
                                                                                                                                                                                                                                                                 Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 sapiens
                                                                                                    121
                                                                                                                          441
                                                                                                                                                                          381
                                                                                                                                                                                                                           321
                                                                                                                                                                                                                                                    127;
                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MERCK & CO INC
                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                          CTGCACG
                                                                                                                                                                                                  GGCCGCAGGCGCAGGCCCGGGCGACAGCCGAGACGTGGAGCGCGCCGGCTCGCTGCAGCT
                                     standard; cDNA; 1876
                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claeps BO,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                          447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /product= "NAChR alpha7 subunit"
/note= "neuronal nicotinic acetylcholine receptor"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       nicotinic acetylcholine receptor; NAChR; drug screening; NAChR alpha7 subunit; gene; ss.
                                                                                                    127
                                                                                                                                                                                                                                                                                                     369
                                                                                                                                                                                                                                                             27.8%;
                                                                                                                                                                                                                                                                                                    A; 553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Chavez-Noriega LE,
                                                                                                                                                                                                                                                Score 127; DB 24;
; Pred. No. 3.8e-13;
                                                                                                                                                                                                                                                                                                    Ç,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       English.
                                                                                                                                                                                                                                                                                                   530 G; 423 T; 1 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Siegel R,
                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             heta subunits in vitro
                                                                                                                                                                                                                                                                             1876;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    nucleotides
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Elliott
                                                                                                                                                                                                                                                                                                                                                                                                                                           The compositions
                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                             prepare
                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    o
R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        of.
                                                                                                                                                                          440
                                                                                                                                                                                                  60
                                                                                                                                                  120
                                                                                                                                                                                                                           380
                                                                                                                                                                                                                                                   0
AAQ51543/c
ID AAQ51543 s
XX
```

```
밁
                   Ş
                                           B
                                                                Ś
                                                                                         В
                                                                                                              Š
                                                                                                                                                                                       Query Match
Best Local S
Matches 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      03-APR-1990;
30-NOV-1992;
08-MAR-1993;
                                                                                                                                                                                                          The invention relates to a method for identifying compounds that are antagonists or agonists of human neuronal nicotinic acetylcholine receptors (nNAChRs), by contacting recombinant cells with a test compound and measuring ion flux, the electrophysiological response of the cells or binding of the test compound to the nNAChR. The recombinant cells are produced by transfection with a nucleic acid encoding at least one human nNAChR (alpha or beta) subunit, such that the cells express an nNAChR comprising one human subunit encoded by the transfected nucleic acid. This sequence represents cDNA encoding the alpha 7 subunit of the human nNAChR polypeptide.
                                                                                                                                                                                                                                                                                                                                                                               Identifying antagonists or agonists of human neuronal nicotinic acetylcholine receptors, by contacting recombinant cells with test compound, and measuring ion flux of cells or binding of compound to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human; neuronal nicotinic acetylcholine receptor; nNAChR; gene; ss; ion\ flux; alpha\ 7\ subunit.
                                                                                                                                                                                      Sequence 1876
                                                                                                                                                                                                                                                                                                                                                                    nNAChR -
                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 2002-711528/77
P-PSDB; ABG70492.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Elliott
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         07-JUN-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US6440681-B1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human neuronal nicotinic acetylcholine receptor alpha 7 subunit cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         06-DEC-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                            Claim 101; Column 57-60; 56pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               08-NOV-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                27-AUG-2002.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (MERI ) MERCK & CO INC
                    441
                                                                                                                 321
                                                                  381
121
                                            61
                                                                                                                                       al Similarity
127; Conserv
                                                                                         _
                                                                                                                                                                                                                                                                                                                                                                                                                                                                ξ,
CTGCACG
                      CTGCACG
                                            GGCCGCAGGCGCAGGCCAGCCGACAGCCGAGACGTGGAGCGCCGGCCCGGCTCGCTGCAGCT
                                                                                                                 Conservative
                                                                                                                                                                                      BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ellis SB,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             92US-0938154.
93US-0028031.
93US-0149503.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  90US-0504455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         95US-0487596
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
73..1581
                    447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              'product= "Human nNAChR alpha 7 subunit"
127
                                                                                                                                                                                       369
                                                                                                                                                  27.8%;
                                                                                                                                                                                      A; 553 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Harpold
                                                                                                                                        0;
                                                                                                                                                  Score 127;
Pred. No.
                                                                                                                                        Mismatches
                                                                                                                                                                                      530 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 <u>₹</u>
                                                                                                                                                                                       423 T; 1
                                                                                                                                                 3.8e-13;
                                                                                                                                                                DB
                                                                                                                                                                24;
                                                                                                                                        0;
                                                                                                                                                                                       other;
                                                                                                                                                             Length 1876;
                                                                                                                                        Indels
                                                                                                                                        0;
                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                 ő
                                                                                         60
                                             120
                                                                   440
                                                                                                                 380
```

standard; DNA;

3861

ВP

14-MAY-1998

(first entry)

```
SXCCCC.
 뭐
                      Ś
                                                     밁
                                                                             Ś
                                                                                                          밁
                                                                                                                                                                                                                                                                                                                       á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
Matches 127; Conserv
                                                                                                                                                                                                                                                                                                                                                                  The present sequence encodes a human neuronal nicotinic acetylcholine receptor (NAChR) subunit. The cells expressing the alpha and/or beta NAChR subunits may be used in a method of screening compounds to identify any which modulate the activity of human neuronal NAChR. Subunit specific antibodies may be used to monitor the distribution
                                                                                                                                                                                                                                                                                and expression density of various subunits in normal vs diseased brain tissues. Testing of single receptor subunits or specific receptor subunit combinations with a variety of potential agonists or antagonists provides information with respect to the function and activity of the individual subunits and should lead to the identification and design of compounds that are capable of very specific interaction with one or
                                                                                                                                                                                                                     Sequence 1876
                                                                                                                                                                                                                                                        more receptor subtypes. The resulting drugs should exhibit fewer unwanted side effects than drugs identified e.g. screening with cells
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     activity of the receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human neuronal nicotinic acetylcholine receptor subunits and DNA also transformed cells useful for screening cpds. which modulate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 1994-303024/37.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         08-MAR-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   08-MAR-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO9420617-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               15-SEP-1994.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             P-PSDB; AAW44153.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (SIBI-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (SALK )
                                                                                                                                                                                                                                               express a variety of subtypes
                         441
                                                                                381
 121
                                                                                                                                     321
                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                tissue;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     neuronal nicotinic acetylcholine receptor alpha-7 subunit cDNA
                                                                                                           L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             neuronal nicotinic acetylcholine receptor; alpha-7 subunit; tissue; screening; NAChR; antibody; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SALK INST BIOTECHNOLOGY IND ASSOC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SIBIA NEUROSCIENCES INC
                                                                            Page 78-79; 99pp;
                         CTGCACG
                                                   GGCCGCAGGCGCAGGCCGACAGCCGAGACGTGGAGCGCGCCGGCTCGCTGCAGCT
                                                                                                                                  GGCCGCAGGCCAGGCCGGGCGACAGCCGAGACGTGGAGCGCGCCGCCTCGCTGCAGCT
CTGCACG
                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ellis SB,
                                                                                                                                                                                                                    BP; 369 A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       93US-0028031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   94WO-US02447.
                        447
127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /product=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                *tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                          27.8%;
                                                                                                                                                                                                                   553 C; 530 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Harpold MM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             "neuronal nicotinic acetylcholine receptor alpha-7 subunit"
                                                                                                                                                                                                                                                                                                                                                                                                                                                        English.
                                                                                                                                                               0
                                                                                                                                                                          Score 127;
Pred. No.
                                                                                                                                                               Mismatches
                                                                                                                                                                                                                   423 T; 1 other;
                                                                                                                                                                       3.8e-13;
                                                                                                                                                                                          DB 15;
                                                                                                                                                                                       Length 1876;
                                                                                                                                                             Indels
                                                                                                                                                            0
                                                                                                                                                            Gaps
                                                                             440
                                                                                                        60
                                                                                                                                  380
                                                   120
```

RESULT 10

22-JAN-2003

(first entry)

```
밁
                                                                                                 8
                                                                                                                          ઠ
                                                                                                                                              Ś
                                                                                                                                                                      ġ
                                                                                                                                                                                          Ś
                                           RESULT 11
                                                                                                                                                                                                                                                                                        Matches 127;
                                                                                                                                                                                                                              Query Match
Best Local Similarity
ABV73248;
                    ABV73248
                                                                                                                                                                                                                                                              Sequence 1876 BP; 369 A; 553 C; 531 G; 423 T; 0 other;
                                                                                                                                                                                                                                                                                                         the human neuronal nicotinic acetylcholine receptor (nAChR). Host cells, esp mammalian cells or amphibian occytes, carrying alpha-7 nucleic acids, opt. in combination with other alpha and/or beta subunit nucleic acids (see also AAT4823-38, AAT48240-41), express
                                                                                                                                                                                                                                                                                                subunit nucleic acids (see also Arrecombinant nAChR subunits useful
                                                                                                                                                                                                                                                                                                                                                        A DNA sequence (AAT48239) codes for the alpha-7 subunit
                                                                                                                                                                                                                                                                                                                                                                               Disclosure; Page 71-73; 108pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                   Nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 1997-065463/06.
P-PSDB; AAW09025.
                                                                                                                                                                                                                                                                                      modulate the activity of human nAChRs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         07-JUN-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                07-JUN-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      27-DEC-1996.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Neuronal nicotinic acetylcholine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 09-APR-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAT48239;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAT48239 standard; DNA; 1876 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WO9641876-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Neuronal nicotinic acetylcholine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (SIBI-) SIBIA NEUROSCIENCES INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ligand-gated
                                                                                                                                                                                                                                                                                                                                                                                                        'n
                                                                              121
                                                                                                   441
                                                                                                                                              321
                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ξ
                                                                                                                                                                                                                                                                                                                                                                                                    acids encoding nicotinic acetylcholine receptor sub-units - screening to determine the effect of drugs on the receptor % \left( 1\right) =\left\{ 1\right\} 
                    standard;
                                                                                                                                                                                           GGCCGCAGGCGCAGGCCGACAGCCGAGACGTGGAGCGCGCCGGCTCGCTGCAGCT
                                                                            CTGCACG
                                                                                                   CTGCACG 447
                                                                                                                        GGCCGCAGGCGCAGGCCACAGCCGAGACGTGGAGCGCGCCGCCTCGCTGCAGCT
                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Harpold MM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       receptor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         95US-0484722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                96WO-US09775
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
73..1581
/*tag= a
                                                                            127
                    cDNA; 1876
                                                                                                                                                                                                                           100.0%;
                                                                                                                                                                                                                                          27.8%;
                                                                                                                                                                                                                   0
                                                                                                                                                                                                                            Score 127; DB 18;
Pred. No. 3.8e-13;
                    ВP
                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  receptor; nAChR; neurotransmitter;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         receptor alpha-7
                                                                                                                                                                                                                                                                                                for identifying cpds.
                                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         subunit
                                                                                                                                                                                                                                                                                                                                                        (AAW09025)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DNA.
                                                                                                                                                                                                                0,
                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                         œ.
                                                                                                                                              440
                                                                                                                                                                     60
                                                                                                                        120
                                                                                                                                                                                            380
```

```
RESULT 8
ABQ47035
ID ABQ4
XX
AC ABQ4
XX
AC ABQ4
XX
XX PRACT PRA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SSSSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local
                  Olek A,
                                                                                                                                                                                                                                                                                                                                                                                        drug; side effect; cancer; central nervous system; cardiovascular; gastrointestinal; respiratory system; single nucleotide polymorph; cell differentiation; ds.
                                                                   (EPIG-)
                                                                                                                  01-SEP-2000;
05-SEP-2000;
                                                                                                                                                                                        01-SEP-2001; 2001WO-EP10074
                                                                                                                                                                                                                                            07-MAR-2002
                                                                                                                                                                                                                                                                                          WO200218632-A2
                                                                                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human; cytosine methylation; 5'-CpG-3'; uracil; cytosine; diagnosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Oligonucleotide for detecting cytosine methylation SEQ ID NO 33626.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   12-JUL-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ABQ47035;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ABQ47035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ABQ13410-ABQ54121 represent genomic DNA sequences used to illustrate the method for determining the degree of cytosine methylation described in the disclosure of the invention,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 556 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       294;
                                                                   EPIGENOMICS
                  Piepenbrock C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   standard; DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTACAATTCCCTAAATAACCGCCGAAACGCTAACCGCGAACTAAAAAAATAAAAAAACGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAAAATAAAAATACCCGAAACGTACCCAACGCCGAAAATACCTCCCGCTCACACCTCGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCTTAAACAACCCCTAACCTAACCAAAAACGCGAAACCGAAAACCCGCTCGATAAAAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCTTGGGCAGCCCCTGGCCTGGCCAGAGGCCGAGAGGCCGAGAGCCCGCTCGGTGGAGACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATAMACCAC 125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GTAAAGCCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             rcaacaracecracreeceaaaaaacereraacraacecraaceecereecracaee
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AACGCAAACCCGAACGACAACCGAAAACGTAAAACGCGCCGACTCGCTACAACTCCGAAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GCGCGCGCCCCGTTAAAGGCGCGCGAGCCGAGCGGCGAGGTGCCTCTGTGGCCGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AACGAAAACGAAAACGAAACTCGTCACGTAAAAAAAACGCGCGAAAACGAAACGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTGCAGTTCCCTGGGTGGCCGCCGAGACGCTGGCCCGGGCTGGAGGGATGGCGGGGCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGGGGTGGAGGCCCGGAGCGTACCCAGCGCGGGAGTACCTCCCGCTCACACCTCGGG 147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                               2000DE-1043826.
2000DE-1044543.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               46.5%;
                                                                   ĀG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; 71 C; 192 G; 227 T; 0 other;
               Berlin K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0; Mismatches 136; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 212.4; DB:
Pred. No. 2.5e-27
                  Guetig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         556;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
```

```
CC This invention describes a novel method for determining the degree of CC methylation of a particular cytosine in a motif 5' CpG-3', present in a CC genomic sample of DNA. The sample is treated chemically to convert CC cytosine (C) but not methylated C, to uracil, then part of the genomic CDNA that contains the target C is amplified to form a labeled amplicon. CC The amplicon is hybridised to two classes, each with at least one member, of oligonuclectides and/or peptide-nucleic acid (PNA) oligomers CC and the degree of hybridisation to both classes is determined from the Clabel on the amplicon. From the ratio of labels hybridised to the two Cc lasses of oligomers, the degree of methylation is calculated. The method is used: (i) for diagnosis and/or prognosis of side effects of therapeutic drugs and of a wide range of diseases, e.g. cancer, disorders CC of the central nervous, cardiovascular, gastrointestinal and respiratory CC systems etc., particularly by detecting mutations or single nucleotide CC injection status of many C residues to be determined simultaneously. CC ABO13410-ABO54121 represent genomic DNA sequences used to illustrate the CC method for determining the degree of cytosine methylation described in CC the disclosure of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Determining the degree of cytosine methylation in genomic DNA, useful for diagnosis and prognosis, comprises selective hybridization of amplicons from chemically treated DNA .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 12; 56pp + Sequence Listing; 56pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 2002-371829/40
                                                                                                                                                                                                                                                                                                                              method
```

```
Query Match
Best Local Similarity
Matches 294; Conserv
                                                                                                  448
                                                                                                                                                                                                     363
                                                                                                                                                                                                                                                                                                   388
                                                                                                                                                                                                                                                                                                                                                                                                      303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     148
          423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCGCGCGCCCGGCTCTTAAAGGCGCGAGCCGAGCGGCGAGGTGCCTCTGTGGCCGCA
ATAAAACCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGCGCAGGCCCGGGCGACAGCCGAGACGTGGAGCCGCCGGCTCGCTGCAGCTCCGGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCTTAAACAACCCCTAACCTAACCAAAAACGCGAAAACCCGAAAACCGCTCGATAAAAACT
                                                                                                  GTAAAGCCAC
                                                                                                                                                                                                TCAACATACGCTACTCGCCGAAAAACGTCTAACTAACGCTAACCGCGTCGCTCCTACACG
                                                                                                                                                                                                                                                                                                                                                                                                      AACGCAAACCGAACGACAACCGAAACGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       caccededecededecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedecicedec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAAAATAAAAATACCCGAAACGTACCCAACGCCGAAAATACCTCCCGCTCACACCCTCGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGGGGTGGAGGTGCCCGGAGCGTACCCAGCGCCGGGAGTACCTCCCGGCTCACACCTCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCTTGGGCAGCCCCTGGCCTGGCCAGAGGCGCGAGAGCCCGCTCGGTGGAGAGCC
                                                                                                                                                                                                                                                                                                   ACGCGCGCCCGACTCCTTAAAAACGCGCGAACCGAACGACGAAATACCTCTATAACCGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             432
                                                                                                        457
                                                                                                                                                                                                                                                                                                   447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 147
                                                                                                                                                                                                     422
                                                                                                                                                                                                                                                                                                                                                                                                      362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               62
```

RESULT 9
AAV12197
ID AAV1
XX
AC AAV1

standard; cDNA;

1876

AAV12197 AAV12197 맑

S

뮍 δ 밁

Ş 밁 Ś

Ş

밁

Ś В

B

밁

Ś

Sequence

556 BP;

227 A; 192 C; 71 G; 66 T; 0 other;

46.5%; ilarity 68.4%; Conservative

0;

Score 212.4; DB 24; Length Pred. No. 2.5e-27; O; Mismatches 136; Indels

DB 24; Length

556; 0;

Gaps

0

```
뮍
                    á
                                                 밁
                                                                      Ş
                                                                                                   밁
                                                                                                                      Ş
                                                                                                                                                    밁
                                                                                                                                                                                                                                                   RESULT 6
ABL34019/c
ABL34019 standard;
                                                                                                                                                                                                              Query Match
Best Local
                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                  The present invention provides a number of human immune system associated genes which are modified by the methylation of cytosines. The sequences can be used in the diagnosis and treatment of immune system disorders, including eye diseases such as retinopathy, neovascular glaucoma and macular degeneration, arteriosclerosis, anaemia, cancer, acute myeloid leukaemia, Alzheimer's disease, AIDS, epilepsy, neurofibromatosis, rheumatoid arthritis, psoriasis, and inflammatory/ulcerative bowel
                                                                                                                                                                                                                                                                                                                                                                                                               Nucleic acid comprising fractor diagnosis and treatment cytosine methylation -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo
                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                         Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Olek A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           30-JUN-2000;
01-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO200200928-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          neurofibromatosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     antiinflammatory; cancer; eye disease; arteriosclerosis; anaemia;
acute myeloid leukaemia; Alzheimer's disease; AIDS; epilepsy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             neuroprotective; anti-HIV; anticonvulsant; ophthalmological; anti-rheumatic; antiarthritic; antidiabetic; antipsoriatic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               02-JUL-2001; 2001WO-EP07537.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      antiarteriosclerotic; antianaemic; cytostatic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (EPIG-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human; immune
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ABL34019;
  516
                         181
                                                   576
                                                                          121
                                                                                                   636
                                                                                                                                                    969
                                                                                                                                                                                                  310;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2002-130909/17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        sapiens.
                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                         1:
                                                                                                                                                                          ۲
                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EPIGENOMICS
                                                                                                                      AGGCCGAGAGCCCGCTCGGTGGAGACTGGGGGGGTGCCCGGAGCGTACCCAGCGCC
                                                                                                                                                                     AGAACGCAAGGGAGAGGTAGAGCCTGGCCTTGGGCAGAGCCCTGGCCAGAGGCGCG
                                                                                                                                                                                                                                                   5304
CCCGAACTAAAAAAATAAAAAAAACGAAAACGAAAACGAAAACTCGTCACGTAAAA
                                                 GAAAATACCTCCCGCTCACACCTCGAACTACAATTCCCCTAAATAACCGCCGAAACGCTAA
                                                                      GGGAGTACCTCCCGCTCACACCTCGGGCTGCAGTTCCCTGGGTGGCCGCCGAGACGCTGG
                                                                                                AAACCGAAAACCCGCTCGATAAAAACTAAAAATAAAAATACCCGAAACGTACCCAACGCC
                                                                                                                                                                                                                                                                                                                                                                                         SEQ ID
                       Piepenbrock
                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2000DE-1032529
2000DE-1043826
                                                                                                                                                                                                                                                   BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first
                                                                                                                                                                                                                                                                           present
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 system disease; cytosine methylation; antiasthmatic;
                                                                                                                                                                                                                                                                                                                                                                                      NO 1992; 32pp + Sequence Listing; German.
                                                                                                                                                                                                                                                 1400 A; 152 C; 1205 G; 2547 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            rheumatoid arthritis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ĀG
                                                                                                                                                                                                           48.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             associated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ċ,
                                                                                                                                                                                                                                                                        sequence is a gene
                                                                                                                                                                                                                                                                                                                                                                                                                           fragment of chemically modified ment of diseases associated with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Berlin
                                                                                                                                                                                                  0;
                                                                                                                                                                                                Score 221.8; D
Pred. No. 4.7e-
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ζ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQ
                                                                                                                                                                                                              4.7e-29;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IJ
                                                                                                                                                                                                                                                                         of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ease; AIDS;
psoriasis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NO:
                                                                                                                                                                                                 147;
                                                                                                                                                                                                                        DB 24;
                                                                                                                                                                                                                                                                         invention
                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                           gene, useful abnormal
                                                                                                                                                                                                0,
                                                                                                                                                                                                Gaps
                                                                                                                         120
                       240
                                                 517
                                                                      180
                                                                                                577
                                                                                                                                                 637
                                                                                                                                                                        60
                                                                                                                                                                                                0
```

```
RESULT 7
ABQ47034/c
ID ABQ470
XX ABQ470
XX ABQ470
XX Oligon
XX Ununan,
KW druga,
KW gastro
KW GNP; c
OS Homo s
XX HOMO s
XX Ol-SEP
XX O1-SEP
XX C1-SEP
XX C1
                       cc methylation of a particular cytosine in a motif 5'. Cg-3', present in a cytosine (c) but not methylated C, to uracil, then part of the genomic cytosine (c) but not methylated C; to uracil, then part of the genomic cC DNA that contains the target C is amplified to form a labeled amplicon. The amplicon is hybridised to two classes, each with at least one cmember, of oligonucleotides and/or periode-nucleic acid (PNA) oligomers and the degree of hybridisation to both classes is determined from the clase of oligomers, the degree of methylation is calculated. The method is used (i) for diagnosis and/or prognosis of side effects of therapeutic drugs and of a wide range of diseases, e.g. cancer, disorders cof the central nervous, cardiovascular, gastrointestinal and respiratory systems etc. particularly by detecting mutations or single nucleotide coplymorphisms (SNP's), and (ii) for differentiation. The method allows the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         This invention methylation of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Determining the degree of cytosine methylation in genomic DNA, for diagnosis and prognosis, comprises selective hybridization amplicons from chemically treated DNA -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Olek A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-SEP-2000; 2000DE-1043826.
05-SEP-2000; 2000DE-1044543.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              drug; side effect; cancer; central new
gastrointestinal; respiratory system;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   07-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Oligonucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-SEP-2001; 2001WO-EP10074
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WO200218632-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SNP; cell differentiation; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  12-JUL-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ABQ47034;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ABQ47034 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (EPIG-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cytosine methylation; 5'-CpG-3'; uracil;
side effect; cancer; central nervous syst;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EPIGENOMICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        eaeceeceaeereccrorprescocecaeececaeececeaeaeaeceaeaeaeeceaeaeae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GAACGACGAAATACCTCTATAACCGCAAACGCAAACCCGAACGACAACCGAAACGTAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TAACGCTAACCGCGTCGCTCCTACACGATAAAACCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              rescerrescercerrescases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGCGCCGGCTCGCAGCTCCGGGACTCAACATGCGCTGCTCGCCGGGAGGCGTCTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ANACGCGCGAAAACGAAACGAAAACGCGCGCGCGCCCGACTCCTTAAAAACGCGCGAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGGCGCGGGGGGGGGGGGGGGGGGGGCGCGCCTCCTTAAAGGCGCGCGAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   56pp + Sequence Listing;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    describes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ĄG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   detecting
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  entry.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   556
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                a novel method
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Berlin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ВР
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cytosine methylation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ~
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       56pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ...rous system; cardicarrous system; cardicarrous system; cardicarrows of the cardicar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Guetig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 for determining the degree a motif 5'-CpG-3', present
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           German.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     diagnosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       33625.
                                                                                                                                                                                                                                                                   the two
. The method
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     useful
of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 in of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       397
```

```
17SULT 5
147037/c
ABQ47037
 밁
                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    믕
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            뭉
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    of the central nervous, cardiovascular, gastrointestinal and respiratory systems etc., particularly by detecting mutations or single nucleotide polymorphisms (SNP'S); and (i) for differentiation of cell or tissue types and for investigating cell differentiation. The method allows the methylation status of many C residues to be determined simultaneously. ABQ1310-ABQ54121 represent genomic DNA sequences used to illustrate the method for determining the degree of cytosine methylation described in
                                                                                                                               drug; side effect; cancer; central nervous system; cardiovascular; gastrointestinal; respiratory system; single nucleotide polymorphism; SNP; cell differentiation; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      therapeutic drugs and of a wide range of diseases, e.g. cancer, disorders of the central nervous, cardiovascular, gastrointestinal and respirators.
01-SEP-2000; 2000DE-1043826
                        01-SEP-2001;
                                                   07-MAR-2002
                                                                            WO200218632-A2
                                                                                                      Homo sapiens.
                                                                                                                                                                      Human; cytosine methylation; 5'-CpG-3'; uracil; cytosine; diagnosis;
                                                                                                                                                                                                Oligonucleotide for detecting
                                                                                                                                                                                                                            12-JUL-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 556
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             disclosure of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                al Similarity
347; Conserv
                                                                                                                                                                                                                                                                                                                                                                        446
                                                                                                                                                                                                                                                                                                                                                                                                     361
                                                                                                                                                                                                                                                                                                                                                                                                                              386
                                                                                                                                                                                                                                                                                                                                                                                                                                                         301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               146
                                                                                                                                                                                                                                                                                                                                                 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTGGGGGTGGAGGTGCCCGGAGCGTACCCAGCGCCGGGAGTACCTCCCGCTCACACACCTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     egectrogecagececeregecagagecegagecegagagecegeregeregaga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGCTGCAGTTCCCTGGGTGGCCGCCGAGACGCTGGCCCGGGCTGGAGGGATGGCGGGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTGGGGGGTGGAGGTGTTCGGAGCGTATTTAGCGTCGGGAGTATTTTTCGTTTATATTTCG
                                                                                                                                                                                                                                                                                                                                                                   CGGTAAAG
                                                                                                                                                                                                                                                                                                                                                                                                     ATTTAATATGCGTTGTTCGTCGGGAGGCGTTTGGTTGGCGTTGGTCGCGTCGTTTTTGTA
                                                                                                                                                                                                                                                                                                                                                                                                                            TAGGCGTAGGTTCGGGCGATAGTCGAGACGTGGAGCGCGTCGGTTCGTTGTAGTTTCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGGCGCGCGTTCGGTTTTTTAAAGGCGCGCGAGTCGAGCGGCGAGGTGTTTTTGTGGTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGGCGCGCCCCGGCTCCTTAAAGGCGCGCGAGCCGAGCGGCGAGGTGCCTCTGTGGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                        2001WO-EP10074
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BP; 57
                                                                                                                                                                                                                            (first
                                                                                                                                                                                                                                                                                                                                                 428
                                                                                                                                                                                                                                                                                                                                                                          453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; 71 C; 241 G; 187 T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           65.3%;
                                                                                                                                                                                                                                                                                 556
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 298.4; DB
Pred. No. 1.1e-4:
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                cytosine methylation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              298.4;
No. 1.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1.1e-41;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 81; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          24;
                                                                                                                                                                                                  SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                  ä
                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                              445
                                                                                                                                                                                                                                                                                                                                                                                                                                                         360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       85
```

S 밁 S

146

496

98

436

밁 Ş

556

26

Query Match Best Local S Matches 347

Similarity

65.3%;

347;

Conservative

0

Pred. No. 1.1e 0; Mismatches Score

298.4; DB 2 No. 1.1e-41;

DB 24; Length 81;

Indels

0;

Gaps

0

145

497

В Ś 8

376

206

gegacegegegegegegectreareacetegagagagececegegegegegegegegegege GGTTGTÄGTTTTTTGGGTGGTCGTCGÄGÄCGTTGGTTCGGGTTGGÄGGGATGGGGGGGG **дествежеттесствеетвессвессвавасветвесссвеествежевальноесвеесе** TTGGGGGTGGAGGTGTTCGGAGCGTATTTAGCGTCGGGAGTATTTTTCGTTTATATTTCG CTGGGGGTGGAGGTGCCCGGAGCGTACCCAGCGCGGGAGTACCTCCCGCTCACACCTCG

266

326 316

TAGGCGTAGGTTCGGGGCGATAGTCGAGACGTGGAGCGCGTCGGTTCGTTGTAGTTTCGGG GGGCGCGCGTTCGGTTTTTTAAAGGCGCGCGAGTCGAGCGGCGAGGTGTTTTTGTGGTCG

325 317 265 377 205 437

257

ACTCAACATGCGCTGCCTGGCGGGAGGCGTCTGGCGTGGCGCTGGCGTCGTGCA

445 197 385

137

386 256

S 吊 5 밁 Ś 망 5

136 446 196

CGGTAAAG CGGTAAAG

```
This invention describes a novel method for determining the degree of comethylation of a particular cytosine in a motif 5'-CpG-3', present in a cytosine (C) but not methylated C, to uracil, then part of the genomic cytosine (C) but not methylated C, to uracil, then part of the genomic cytosine (C) but not methylated C, to uracil, then part of the genomic cytosine (C) but not methylated C is amplified to form a labeled amplicon. Cytosine cytosine in hybridised to two classes, each with at least one cytosine amplicon is hybridisation to both classes is determined from the cytosine amplicon. From the ratio of labes hybridised to the two classes of oligomers, the degree of methylation is calculated. The method is used: (i) for diagnosis and/or prognosis of side effects of therapeutic drugs and of a wide range of diseases, e.g. cancer, disorders of the central nervous, cardiovascular, gastrointestinal and respiratory cytosine etc., particularly by detecting mutations or single nucleotide cypes and for investigating cell differentiation. The method allows the methylation status of many C residues to be determined simultaneously. Cabalylo-Abg34121 represent genomic DNA sequences used to illustrate the central for the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Determining the degree of cytosine methylation in genomic DNA, for diagnosis and prognosis, comprises selective hybridization amplicons from chemically treated DNA -
  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             05-SEP-2000; 2000DE-1044543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (EPIG-)
556 BP; 187 A; 241 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          + Sequence Listing;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ą
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ú
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Berlin
  71 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ۲
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          56pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Guetig
    57
    T; 0 other;
```

```
RESULT 3.
ABL34018
ID ABL3
XX
AC ABL3
XX
AC ABL3
XX
DT 26-N
DT 26-N
XX
DE Huma
XX
Huma
                                                                                                                                                                                                        WWW.XSXAXXBXBXXAXXAXAXAAFAF....XXDDDDDDXS
 Ş
                              밁
                                                         á
                                                                                       밁
                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  용
                                                                                                                                               Query Match
Best Local S
Matches 369
                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                              genes which are modified by the methylation of cytosines. The sequence can be used in the diagnosis and treatment of immune system disorders, including eye diseases such as retinopathy, neovascular glaucoma and macular degeneration, arteriosclerosis, anaemia, cancer, acute myeloid leukaemia, Alzheimer's disease, AIDS, epilepsy, neurofibromatosis, rheumatoid arthritis, psoriasis and inflammatory/ulcerative bowel diseases. The present sequence is a gene of the invention.
                                                                                                                                                                                                                                                                                                                                                                                            Nucleic acid comprising fragment of chemically modified for diagnosis and treatment of diseases associated with cytosine methylation -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            30-JUN-2000;
01-SEP-2000;
                                                                                                                                                                                                                                                                                                                     The present invention provides a number of human immune system associated genes which are modified by the methylation of cytosines. The sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                antiinflammatory; cancer; eye disease; arteriosclerosis; anaemia; acute myeloid leukaemia; Alzheimer's disease; AIDS; epilepsy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      02-JUL-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   03-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         gene;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       neurofibromatosis; rheumatoid arthritis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 neuroprotective; anti-HIV; anticonvulsant; ophthalmological;
antirheumatic; antiarthritic; antidiabetic; antipsoriatic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 antiarteriosclerotic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human immune system associated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (EPIG-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO200200928-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        26-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ABL34018;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ABL34018
                              4669
                                                                                         4609
                                                                                                                                                                                                                                                                                                                                                                                                                                                       2002-130909/17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Þ
   121
                                                                                                                                                 369;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  301
                                                          61
                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EPIGENOMICS
                                                                                                                                                                                                       5304
GGGAGTACCTCCCGCTCACACCTCGGGCTGCAGTTCCCTGGGTGGCCGCCGAGACGCTGG
                            AGGTCGAGAGTTCGTTCGGTGGAGATTGGGGGGTGGTGGGAGGGTATTTAGCGTC
                                                   AGGCCGAGAGCCCGCTCGGTGGAGACTGGGGGGTGGAGGTGCCCGGAGCGTACCCAGCGCC
                                                                                    AGAACGTAAGGGAGAGGTAGAGTTTGGTTTTGGGTAGTTTTTGGTTTAGAGGCGCG
                                                                                                              AGAACGCAAGGGAGAGGTAGAGCCTGGCCTTGGGCAGCCCCTGGCCTGGCCAGAGGCGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CGCGCCGGCTCGCTGCAGCTCCGGGACTCAAC 392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Piepenbrock
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CGCGCCGGCTCGCTGCAGCTCCGGGACTCAAC 392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAGCGGCGAGGTGCCTCTGTGGCCGCAGGCGCAGGCCCGGGCGACAGCCGAGACGTGGAG
                                                                                                                                              69.7%;
ilarity 81.5%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2000DE-1032529.
2000DE-1043826.
                                                                                                                                                                                                                                                                                                                                                              ID NO 1991; 32pp + Sequence Listing; German.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2001WO-EP07537.
                                                                                                                                                                                                     BP; 1480 A; 152 C; 1219 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ĀG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           disease; cytosine methylation;
antianaemic; cytostatic; noot;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Berlin
                                                                                                                                            Score 318.6;
Pred. No. 3.2e
0; Mismatches
                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQ
                                                                                                                                           3.2e-45;
ches 84;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IJ
                                                                                                                                                                                                     2453
                                                                                                                                                                       DB 24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ŏ:
                                                                                                                                                                                                    ..
H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              nootropic;
                                                                                                                                                                                                     0
                                                                                                                                              Indels
                                                                                                                                                                                                     other;
                                                                                                                                                                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    epilepsy;
bowel disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             antiasthmatic;
                                                                                                                                                                                                                                                                                                                                                                                                                        gene, useful
                                                                                                                                                                                                                                                                                                                                                                                                     abnormaı
                                                                                                                                            0,
                           4728
                                                                                    4668
                                                       120
                                                                                                                 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               360
                                                                                                                                            0
```

```
ARGSULT 4
ARGATICA
AR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        멆
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                        This invention describes a novel method for determining the degree of methylation of a particular cytosine in a motif 5'-CpG-3', present in a genomic sample of DNA. The sample is treated chemically to convert cytosine (C) but not methylated C, to uracil, then part of the genomic DNA that contains the target C is amplified to form a labeled amplicon. The amplicon is hybridised to two classes, each with at least one member, of oligonucleotides and/or paptide-nucleic acid (PNA) oligomers and the degree of hybridisation to both classes is determined from the label on the amplicon. From the ratio of labels hybridised to the two classes of oligomers, the degree of methylation is calculated. The meth
                                                                                                                                                                                                                                                                                                                                                                     Determining the degree of cytosine meth
for diagnosis and prognosis, comprises
amplicons from chemically treated DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SNP;
                                                                                                                                                                                                                                                                                                                            Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 2002-371829/40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-SEP-2000;
05-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         drug; side effect; cancer; central nervous system;
gastrointestinal; respiratory system; single nucle;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Olek A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-SEP-2001; 2001WO-EP10074
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          07-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human; cytosine methylation; 5'-CpG-3'; uracil; cytosine;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Oligonucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ABQ47036;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ABQ47036 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO200218632-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       12-JUL-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (EPIG-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5029
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4969
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cell differentiation; ds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EPIGENOMICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Piepenbrock C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGGCGTTGGTCGCGTCGTTTTTGTACGGTAAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GAGCGGCGAGGTGCCTCTGTGGCCGCAGGCGCAGGCCCGGGCGACAGCCCGAGACGTGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGGCGCGCGGGGGGGGGGGGGGGGGGGCCCCGGCTCCTTAAAGGCGCGCGAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TEGCECTEGCCECTCCTCCACGGTAAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CGCGTCGGTTCGTTGTAGTTTCGGGATTTAATATGCGTTGTTCGTCGGGAGGCGTTTGGT 5028
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GAGCGGCGAGGTGTTTTTGTGGTCGTAGGCGTAGGTTCGGGCGATAGTCGAGACGTGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGGCGCGCGGGGGGGGGGGGGGGGGGGGGGTTTTTTTAAAGGCGCGCGAGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGGAGTATTTTTCGTTTATATTTCGGGTTGTAGTTTTTTTGGGTGGTCGTCGAGACGTTGG
                                                                                                                                                                                                                                                                                                                    56pp + Sequence Listing; 56pp;
for diagnosis and/or prognosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2000DE-1043826.
2000DE-1044543.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              tor detecting
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Berlin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ₽₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cytosine methylation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ᄌ
                                                                                                                                                                                                                                                                                                                                                                                                methylation in genomic DNA, ises selective hybridization
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Guetig
                                                                                                                                                                                                                                                                                                                         German.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5061
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cardiovascu.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            polymorphism,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             diagnosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                             the two
                                                                                                          oligomers
                                                                                                                                                                                                                                                                                                                                                                                                     useful
of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4968
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4848
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4788
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              240
```

밁 Ş

```
RESULT 2
AAX56151
ID AAX5
XX
AC AAX5
AC AAX5
DT 15-J
XX
DT 15-J
XX
XX
DE Huma
                                                                                                                                                                                                                                                         맑
                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                    뫄
                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The present invention describes an isolated nucleotide sequence (I) cencoding at least a portion of the human alpha-7 neuronal nicotinic cacetylcholine receptor (alpha7-hnkhR). Also described are: (1) a cetylcholine receptor (2) a vector comprising (1); (2) a vector comprising (1); (3) a host cell cast 15 nucleotides which hybridises under stringent conditions to at cleast 15 nucleotides which hybridises under stringent conditions to at cleast a portion of (1); (5) a method for detection of a polynucleotide comprising at cc encoding alpha 7-hnAChR in a biological sample; and (6) a method for amplification of nucleic acid from a sample suspected of containing nucleic acid encoding alpha 7-hnAChR. The primers and probes from the present invention can be used on brain tissue and blood samples of thumans suspected of suffering from schizophrenia, small cell lung carcinoma, breast cancer and nicotine-dependent illness. This is carcinoma, breast cancer and nicotine-species of schizophrenia. Other illnesses cancer and nicotine-species of schizophrenia color my colonic particularly useful for diagnosed are epilepsy (e.g. juvenile myoclonic pailepsy) and Prader-Willi and Angelman's syndromes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches 457;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local
                 Human alpha-7 nicotinic receptor nucleotide sequence fragment
                                                               15-JUL-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 457
                                                                                                         AAX56151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human alpha-7 neuronal nicotinic acetylcholine receptor and related
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 1999-288306/24
                                                                                                                                                                                                                                                         421
                                                                                                                                                                                                                                                                                              421
                                                                                                                                                                                                                                                                                                                                          361
                                                                                                                                                                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                  361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ш
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGGAGTACCTCCCGCTCACACCTCGGGCTGCAGTTCCCTGGGTGGCCGCCGAGACGCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGGCCGAGAGCCCCCCCCGGAGGAGCTGGAGGGTGGAGGGTGCCCGGAGCGTACCCAGCGCC
                                                                                                                                                 standard; DNA; 392
                                                                                                                                                                                                                                                                               TGGCGCTGGCCGCGTCGCTCCTGCACGGTAAAGCCAC
                                                                                                                                                                                                                                                                                                                                                                   CGCGCCGGCTCGCTGCAGCTCCGGGGACTCAACATGCGCTTCTGCCCCGGGAGGCGTCTGGC
                                                                                                                                                                                                                                                                                                                                        cececceecrecaecreceeeacreaacarececrecreceeeeaagecerereee
                                                                                                                                                                                                                                                                                                                                                                                                                        GAGCGGCGAGGTGCCTCTGTGGCCGCAGGCCCAGGCCCGGGCGACAGCCGAGACGTGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                               сссваественеемтевсвеессвеемнеем сесевеессвеессвеестся сется сетеме
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGGAGTACCTCCCGCTCACACCTCGGGCTGCAGTTCCCTGGGTGGCCGCCGAGACGCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGGCCGAGAGCCCGCTCGGTGGAGACTGGGGGGTGGAGGTGCCCGGAGCGTACCCAGCGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGAACGCAAGGGAGAGGTAGAGCCTGGCCTTGGGCAGCCCCTGGCCTGGCCAGAGGCGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGAACGCAAGGGAGAGGTAGAGCCTTGGCCTTGGCCAGCCCTTGGCCTGGCCAGAGGCGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGGCGCGCGGGGGCGGGGGGGGGGGGGGGCGCGCCCCGGCTCCTTAAAGGCGCGCGAGCC 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4:
                                                             (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BP; 58 A; 145 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                104pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 457; DB 20;
Pred. No. 3.5e-68;
); Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          204 G; 50 T; 0 other;
                                                                                                                                                                                                                                                       457
                                                                                                                                                                                                                                                                                            457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
```

```
밁
                             8
                                                                밁
                                                                                              Ś
                                                                                                                                 밁
                                                                                                                                                                 Ş
                                                                                                                                                                                                    B
                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                      The present invention describes an isolated nucleotide sequence (I) CC encoding at least a portion of the human alpha-7 neuronal nicotinic acetylcholine receptor (alpha7-hnAChR). Also described are: (1) a CC peptide encoded by (I); (2) a vector comprising (I); (3) a host cell transformed with a vector of (2); (4) a polynucleotide comprising at least 15 nucleotides which hybridises under stringent conditions to at least a portion of (I); (5) a method for detection of a polynucleotide encoding alpha 7-hnAChR in a biological sample; and (6) a method for amplification of nucleic acid from a sample suspected of containing nucleic acid encoding alpha 7-hnAChR. The primers and probes from the present invention can be used on brain tissue and blood samples of humans suspected of suffering from schizophrenia, small cell lung carcinoma, breast cancer and nicotine-dependent illness. This is carcinoma, breast cancer and nicotine-dependent illness. This is carcinoma, buseful for diagnosis of schizophrenia. Other illnesses that can be studied/diagnosed are epilepsy (e.g. juvenile myocionic epilepsy) and Prader-Willi and Angelman's syndromes.
                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                     Matches 392;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human; alpha-7 nicotinic receptor; neuronal; hybridisation; probe; alpha-7 neuronal nicotinic acetylcholine receptor; schizophrenia; small cell lung carcinoma; breast cancer; nicotine-dependent illness; epilepsy; juvenile myoclonic epilepsy; Prader-Willi syndrome; Angelman's syndrome; PCR primer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 392 BP; 51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 1; Fig 8; 104pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human alpha-7 neuronal nicotinic acetylcholine receptor and related
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 1999-288306/24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Freedman R,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   23-OCT-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    29-APR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    W09920757-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     15-OCT-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (FREE/) FREEDMAN
(LEON/) LEONARD S
   241
                                                                  181
                                                                                                  181
                               241
                                                                                                                                 121
                                                                                                                                                                  121
                                                                                                                                                                                                    61
                                                                                                                                                                                                                                   13
                                                                                                                                                                                                                                                                    ш
                                                                                                                                                                                                                                                                                                                                                     Similarity
                   AGGCGCGCGGGGGGGGGGGGGGGGGGGGCGCCCGGCTCCTTAAAGGCGCGCGAGCC
                                                                                       GGGAGTACCTCCCGCTCACACCTCGGGCTGCAGTTCCCTGGGTGGCCGCCGAGACGCTGG
                                                                                                                                                        GGGAGTACCTCCCGCTCACACCTCGGGCTGCAGTTCCCCTGGGTGGCCGCCGAGACGCTGG
                                                                                                                                                                                                                                   AGGCCGAGAGCCCGCTCGGTGGAGACTGGGGGGGTGGAGGTGCCCGGAGCGTACCCAGCGCC
                                                                                                                                                                                                                                                                                                      AGAACGCAAGGGAGAGGTAGAGCCTGGCCTTGGGCAGCCCCTGGCCTGGCCAGAGGCGCG
                                                                  AGGCCGAGAGCCCGCTCGGTGGAGACTGGGGGGTGGAGGTGCCCGGAGCGTACCCAGCGCC
                                                                                                                                                                                                                                                                    AGAACGCAAGGGAGAGGTAGAGCCTGGCCTTGGGCAGCCCCTGGCCAGAGGCGCG
                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Leonard
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          J R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   97US-0956518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     98WO-US21762
                                                                                                                                                                                                                                                                                                                                                                                                      A; 122 C; 180 G; 39
                                                                                                                                                                                                                                                                                                                                                   85.8%; Score 392; DB 20;
100.0%; Pred. No. 2.6e-57;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                     0,
                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                      T; 0 other;
                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                   Length 392;
                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                     0
                                 300
                                                                240
                                                                                                240
                                                                                                                                 180
                                                                                                                                                                  180
                                                                                                                                                                                                  120
                                                                                                                                                                                                                                   120
                                                                                                                                                                                                                                                                   60
300
                                                                                                                                                                                                                                                                                                    60
```

S

301

GAGCGGCGAGGTGCCTCTGTGGCCGCAGGCGCAGGCCCGGGCGACAGCCGAGACGTGGAG

```
Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OM nucleic -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        rched:
                                                                                                                                                                                                                                                                                                                                                              Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
             392
318.6
298.4
298.4
221.8
212.4
212.4
                                                                                                                                                                                                                                             Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  seq length: 0
seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               N_Geneseq_19Jun03:*

1: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1980.DAT:*

2: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1981.DAT:*

3: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1983.DAT:*

4: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1983.DAT:*

5: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1984.DAT:*

6: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1985.DAT:*

7: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1987.DAT:*

9: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1987.DAT:*

9: /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1988.DAT:*
             100.0
85.8
69.7
65.3
65.3
48.5
46.5
                                                                                                                                                                                                                                             Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          iDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           September 7, 2003, 05:13:39 ; Search time 269 Seconds (without alignments) 4586.034 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2552756 seqs, 1349719017 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-08-956-518A-94
457
                                                                                                                                                                                                                                                                                                                                                                                                                                                              SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1992.DAT:

/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1992.DAT:

/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1993.DAT:

/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1994.DAT:

/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1995.DAT:

/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1995.DAT:

/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1996.DAT:

/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1999.DAT:

/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1999.DAT:

/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA2001A.DAT:

/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA2001B.DAT:

/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA2001B.DAT:

/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA2001B.DAT:

/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA2001B.DAT:

/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA2001B.DAT:

/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA2001B.DAT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGAACGCAAGGGAGAGGTAG......CTCCTGCACGGTAAAGCCAC 457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GenCore version 5.1.6 Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                             Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            \SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1989.DAT:*\SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1990.DAT:*\SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1991.DAT:*
                                                                                                                                                                                                                                             DB
                                                                                                                                                                                                                                             ij
          AAX56144
AAX56151
ABL34018
ABQ47036
ABQ47037
ABL34019
ABQ47034
ABQ47035
                                                                                                                                                                                                                                                                                                                     SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5105512
Human alpha-7 nico
Human alpha-7 nico
Human immune syste
Oligonucleotide fo
Oligonucleotide fo
Human immune syste
Oligonucleotide fo
Oligonucleotide fo
                                                                                                                                                                                                                                     Description
```

KW ALL XXX HC XXX L XXX L XXX L XXX FX XXX FX XXX FX XXX FX XXX FX	ACC XXX ACC XXX XXX XXX XXX XXX XXX XXX		
		44444000000000000000000000000000000000	>
sal sal corrections of the correction of the cor	6144 s: 6144; 6144; 0UL-199: UL-199: a-7 nee a-7 nee a-7 nee a-7 nee	55555555555555555555555555555555555555	
yndro	tandard; (firs) (firs) 1-7 nico 1-7 nico	11111111111111111111111111111111111111	
9 PCH 0956	DNA; enti enti inic tinic cotin cotin cotin cotin cotin cotin cotin	1876 1876 1876 1876 1876 1876 1000 1000 1000 1127 1114955 1114955 11337 11337 11337 11337 11337 11339 43058	,
18 65	u ii. A A A	1 1 2 2 4 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2	
Se .	GNMENTS ucleotide seque neuronal; hybr holine receptor cancer; nicotin gsy; prader-Wil	AAV12197 AAY18239 ABV73248 ABSS4875 AAQ51543 AAQ51543 AAQ52496 ABQ52497 AAAO2447 AAAO2447 AAAO2447 AAAO2463 AAX53491 AAX53491 AAX53491 AAX53491 AAX698631 AAX53491 ABK98592 AAX698631 ABK98592 AAX698631 ABBY97455 ABBY97455 ABBY9745 ABBY9745 ABBY9745 ABBY9745 ABBY9745 ABBY9745 ABBY9745 ABBY9745 ABBY9745 ABBY9746 A	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
y by track of	nce fragment #1. idisation; probe; schizophrenia; e-dependent illness; li syndrome;	Human neuronal nic Neuronal nicotinic Human neuronal nicotinic Human neuronal nic Human neuronal nic Lipopolysaccharide for Independent of the Human adenosine Al Oligonucleotide for Human colon cancer Human gene express Human gene express Human adenosine Al Vector pEPEF1 cont Human II-1ra BAC Gene #3953 used to Lung cancer relate fung cancer relate for Oligonucleotide for Ol	

NAME/KEY: modified base LOCATION: (1082)(1084) OTHER INFORMATION: a, t, FEATURE: NAME/KEY: modified base LOCATION: (1105)(1107) OTHER INFORMATION: a, t, FEATURE: NAME/KEY: modified base LOCATION: (1130) OTHER INFORMATION: a, t, FEATURE: NAME/KEY: modified base LOCATION: (1130) OTHER INFORMATION: a, t, FEATURE: NAME/KEY: modified base LOCATION: (1147)	NAME/KEY: modified_base LOCATION: (995) OTHER INFORMATION: a, t, FEATURE: NAME/KEY: modified_base LOCATION: (1066)(1067) OTHER INFORMATION: a, t, FEATURE:	NAME/KEY: modified base LOCATION: (941) OTHER INFORMATION: a, t, FEATURE: NAME/KEY: modified base LOCATION: (993) OTHER INFORMATION: a, t,	(897) PORMATION: a, modified_bas (920) CORMATION: a,	NAME/KEY: modified_base LOCATION: (892) COTHER INFORMATION: a, t, FEATURE: NAME/KEY: modified base	RTINE IN	NAME/KEY: modified_base LOCATION: (761) OTHER INFORMATION: a, t, FEATURE: NAME/KEY: modified_base LOCATION: (763) OTHER INFORMATION: a, t, FEATURE:	NAME/KEY: modified_base LOCATION: (752) OTHER INFORMATION: a, t, FEATURE: NAME/KEY: modified base LOCATION: (754)(756) OTHER INFORMATION: a, t, FEATURE:	LOCATION: (745)(747) OTHER INFORMATION: a, t, FEATURE: NAME/KEY: modified_base LOCATION: (750) OTHER INFORMATION: a, t, FEATURE:
ŭ o o	ů ů	ů ů	ů ů	ú	ō ō	ů ů	ō ō	ů ů
à à à	å å	ά ά	å å	Ď	ά ά	ė ė	ά á	φ φ.
unknown unknown unknown	unknown unknown	unknown	unknown	unknown	unknown	unknown unknown	unknown	unknown unknown
or or	9 9 9 F	or or	8	e R	e e	o	e e	or or
other other	other	other	other	other	other	other	other other	other
				•	,			

	·											:						
NAME/KEY: modified base LOCATION: (1968)(1980) OTHER INFORMATION: a, t,	AME/KE OCATIO THER I	AME/ OCAT	AME/I OCATI	NAME/KEY: modified_base LOCATION: (1674) OTHER INFORMATION: a, t, FEATURE:	AME/KE OCATIO THER I	NAME/KEY modified_base LOCATION: (1637) OTHER INFORMATION: a, t, FEATURE:		NAME/KEY: modified_base LOCATION: (1605) OTHER INFORMATION: a, t,	NAME/KEY: modified_base LOCATION: (1601) OTHER INFORMATION: a, t,	HAM	NAME/KEY: modified_base LOCATION: (1500) OTHER INFORMATION: a, t,	HEAM	AME/KE OCATIO THER I		NAME/KEY: modified_base LOCATION: (1233) OTHER INFORMATION: a, t,	NAME/KEY: modified_base LOCATION: (1202) OTHER INFORMATION: a, t,	AME/KE	7 H
ņ	ů	ú	ů	ũ	ú	o,	Ç	ů	ů.	, o	, O	ũ	ū	<u>ο</u> .	ũ	ņ	,	ņ
ά	ā	á	å	á	ά •	ā	á	á	ā	ω	9,	ώ·	á	á	$\tilde{\boldsymbol{\sigma}}^{\bullet}\cdot$	ά	ά	ģ
unknown	unknown	unknown	unknown	unknown	unknown	unknown	unknown	unknown	unknown	unknown	unknown	unknown.	unknown	unknown	unknown	unknown	unknown	unknown
Or	or	9	970	o F	or	ę	9	or Or	ę.	or r	or C	9	9	ę,	or r	o R	o R	9
other	other	other	other	other	other	other	other	other	other	other	other	other	other	other	other	other	other	other

5 B 5 B

밁

```
Sequence 11, Application US/10349836
Publication No. US20030138911A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches 127;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10-349-836-11
                                                                                                                                                                                                                                                               TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 11:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                        CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/349,836
FILING DATE: 23-3an-2003
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/660,451A
FILING DATE: June 7, 1996
APPLICATION NUMBER: 08/484,722
FILING DATE: 07-Jun-95
ATTORNEY/AGENT INFORMATION:
NAME: Seidman, Stephanie L
DEGISTER ON NUMBER: 03 25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ZIP: 92101-2926
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CORRESPONDENCE ADDRESS:
ADDRESSEE: Brown, Martin, Haller & McClain
STREET: 1660 Union Street
                                                                                                                                                  HYPOTHETICAL: NO
                                                                                                                                                                    TOPOLOGY: linear MOLECULE TYPE: Genomic DNA
                                                                                                                                                                                                                                                                                                                                        TELECOMMUNICATION INFORMATION: TELEPHONE: 619-238-0999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Elliott, Kathryn J.
Harpold, Michael M.
TITLE OF INVENTION: HUMAN NEURONAL NICOTINIC ACETYLCHOLINE
                                                                                              ORIGINAL SOURCE:
                                                                                                                                   ANTI-SENSE: NO
                                                                                                              FRAGMENT TYPE: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61
                 NAME/KEY: 5'UTR
LOCATION: 73...1581
OTHER INFORMATION: 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGCCGCAGGCCCAGGCCCACACACCCGAGACGTGGAGCGCGCCGGCTCGCTGCAGCT 380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTGCACG 447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME: Seidman, Stephanie L
REGISTRATION NUMBER: 33,779
REFERENCE/DOCKET NUMBER: 6362-9370B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ Version 1.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTGCACG 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGCCGCAGGCGCAGGCCGAGACAGCCGAGACGTGGAGCGCGCCGGCTCGCTGCAGCT
                                                                                                                                                                                                       STRANDEDNESS: double
                                                                                                                                                                                                                            TYPE: nucleic acid
                                                                                                                                                                                                                                           ENGTH: 1876 base pairs
                                                                                                                                                                                                                                                                                                                       ELEFAX: 619-238-0062
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ': San Diego
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       27.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RECEPTOR COMPOSITIONS AND METHODS EMPLOYING SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 127; DB 10;
; Pred. No. 1.8e-19;
0; Mismatches 0;
                   alpha7 human neuronal nicotinic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 1876;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
NAME/KEY: modified_base
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
```

```
US-10-017-161-1857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; SEQUENCE DESCRIPTION: SEQ ID NO; 11: US-10-349-836-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQ ID NO 1857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
Matches 127; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 1857, Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILE REFERENCE: 084335/0152
CURRENT APPLICATION NUMBER: US/10/017,161
CURRENT FILING DATE: 2002-12-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOFTWARE: PatentIn Ver. 2.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR FILING DATE: 2001-06-18
NUMBER OF SEQ ID NOS: 2430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION NUMBER: UP 2001/246789 PRIOR FILING DATE: 2001-06-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: SUWA, MAKIKO
APPLICANT: ASAI, KIYOSI
NAME/KEY: modified base LOCATION: (739)..(743) OTHER INFORMATION: a, t,
                                                                 NAME/KEY: modified base LOCATION: (709)...(736) OTHER INFORMATION: a, t,
                                                                                                                                   OTHER INFORMATION: a, t,
                                                                                                                                                      NAME/KEY: modified_base LOCATION: (704)..(707)
                                                                                                                                                                                                                                                                 OTHER INFORMATION: a, t,
                                                                                                                                                                                                     OTHER INFORMATION: a, t,
                                                                                                                                                                                                                        NAME/KEY: modified_base LOCATION: (671)..697)
                                                                                                                                                                                                                                                                                        NAME/KEY: modified_base LOCATION: (658)..(669)
                                                                                                                                                                                                                                                                                                                                   NAME/KEY: modified base LOCATION: (556)..(655)...
                                                                                                                                                                                                                                                                                                                                                                                                   NAME/KEY: CDS
LOCATION: (201)..(2963)
                                                                                                                                                                                                                                                                                                                                                                                                                                                JAME/KEY: source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PPLICANT: ABURATANI, HIROYUKI
ITLE.OF INVENTION: NOVEL G PROTEIN-COUPLED RECEPTORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               321 GGCCGCAGGCCAGGCCCAGCCGACAGCCGAGACGTGGAGCGCCGGCCTCGCTGCAGCT 380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTGCACG 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCGGGACTCAACATGCGCTGCTCGCCGGGAGGCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTGCACG 447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ASAI, KIYOSHI
AKIYAMA, YUTAKA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            , Application US/10017161 o. US20030143668A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               27.8%;
     ņ
                                                                                                                                                                                                                                                                      ņ
                                                                                                                                                                                                      'n
                                                                                                                                                                                                                                                                                                                                     ņ
     á
                                                                                                                                                                                                                                                                                                                                     ά
                                                                   á
                                                                                                                                     á
                                                                                                                                                                                                     á
                                                                                                                                                                                                                                                                     á.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 127; DB 12;
Pred. No. 1.8e-19;
      unknown or other
                                                                                                                                      unknown
                                                                                                                                                                                                      unknown
                                                                                                                                                                                                                                                                        unknown
                                                                                                                                                                                                                                                                                                                                        unknown
                                                                      unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                      or other
                                                                                                                                                                                                      or other
                                                                                                                                                                                                                                                                        or other
                                                                                                                                                                                                                                                                                                                                      or other
                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTGGCTGGCGCTGGCCGCGTCGCTC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 1876;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60
```

277

337

397 300

```
Ś
                                                                                                                                                                                                                                                        밁
                                             Ś
                                                                                          뭐
                                                                                                                           S
                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURE:
; OTHER INFORMATION: chemically treated genomic DNA (Homo sapiens)
US-10-311-455-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   당
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 1992, Application US/10311455 Publication No. US20030143606A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                      Query Match 48.5%;
Best Local Similarity 67.8%;
Matches 310; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION NUMBER: DE 10043826.1
PRIOR FILING DATE: 2000-09-01
NUMBER OF SEQ ID NOS: 2424
SEQ ID NO 1992
LENGTH: 3304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CURRENT APPLICATION NUMBER: US/10/311,455
CURRENT FILING DATE: 2002-12-16
PRIOR APPLICATION NUMBER: PCT/EP01/07537
PRIOR FILING DATE: 2001-07-02
PRIOR APPLICATION NUMBER: DE 10032529.7
PRIOR FILING DATE: 2000-06-30
PRIOR FILING DATE: 2000-06-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: OLEK, Alexander
APPLICANT: PIEPENBROCK, Christian
APPLICANT: BERLIN, Kurt
TITLE OF INVENTION: Diagnosis of Diseases
TITLE OF INVENTION: cytosine methylation
FILS REFERENCE: 5013.1014
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: DNA
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4849
          516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              301
                                               181
                                                                                          576
                                                                                                                               121
                                                                                                                                                                        636 AAACCGAAAACCCGCTCGATAAAAACTAAAAATAAAAATACCCGAAACGTACCCAACGCC
                                                                                                                                                                                                                                                        19
                                               CCCGGGCTGGAGGGATGGCGGGGCGGGGAACGGGGGGCGGGGGCTCGTCACGTGGAG 240
                                                                                                                                                                                                             AGGCCGAGAGCCCGCTCGGTGGAGACTGGGGGGGTGGAGGTGCCCGGAGCGTACCCAGCGCC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGGAGTACCTCCCGCTCACACCTCGGGCTGCAGTTCCCTGGGTGGCCGCCGAGACGCTGG 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GAGCGGCGAGGTGCCTCTGTGGCCGCAGGCGCAGGCCCGGGCGACAGCCGAGACGTGGAG 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGGCGCGCGGGGCGGGGCGGGGGCGCGCGCCCCTTAAAGGCGCGCGAGCC 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGGAGTATTTTTCGTTTATATTTCGGGTTGTAGTTTTTTTGGGTGGTCGTCGAGACGTTGG 478
                                                                                                                                                                                                                                                                                             AGAACGCAAGGGAGAGGTAGAGCCTGGCCTTGGGCAGACCCCTGGCCTAGAGGCCGCG 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        reacecreececerecerececegramae 453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cececeecrecrecaecreceeeacreaacarecerecreceeeeaeeeerereec 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGGAGTACCTCCCGCTCACACCTCGGGCTGCAGTTCCCTGGGTGGCCGCCGAGACGCTGG
                                                                                      GAAAATACCTCCCGCTCACACCTCGAACTACAATTCCCTAAATAACCGCCGAAACGCTAA 517
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GAGCGGCGAGGTGTTTTTGTGGTCGTAGGCGTAGGTTCGGGCGATAGTCGAGACGTGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGGCGTTGGTCGCGTCGTTTTTGTACGGTAAAG 5061
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGCGTCGGTTCGTTGTAGTTTCGGGATTTAATATGCGTTGTTCGTCGGGAGGCGTTTGGT 5028
                                                                                                                                                                                                                                                                                                                                      Score 221.8; DB 1
Pred. No. 3.5e-40;
0; Mismatches 147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Associated with the
                                                                                                                                                                                                                                                                                                                                                                               DB 12; Length 5304;
                                                                                                                                                                                                                                                                                                                                        147; Indels
                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Immune
                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   System
                                                                                                                                                                      577
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4968
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                180
                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                by Deteri
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
, SEQUENCE DESCRIPTION: SEQ ID US-09-892-985-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-892-985-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 7, Application US/09892985 Patent No. US20020111463A1 GENERAL INFORMATION:
                                                                                                                                                                                                               TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 7:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                 PRIOR APPLICATION NUMBER: US/09/217,345
APPLICATION NUMBER: US/09/217,345
FILING DATE: 21-DEC-98
APPLICATION NUMBER: US 08/467,574
FILING DATE: 05-JUN-95
APPLICATION NUMBER: US 08/466,589,
FILING DATE: 05-JUN-95
APPLICATION NUMBER: US 08/028,031
FILING DATE: 08-MAR-93
APPLICATION NUMBER: US 08/028,031
FILING DATE: 08-MAR-93
AFTORNEY/AGENT INFORMATION:
NAME: Seidman, Stephanie L
REGISTRATION NUMBER: 33,779
REFERENCE/DOCKET NUMBER: 24735-9949B
TELEPHONE: 619-450-8400
TELEPAX: 619-587-5360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ Version 1.5
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COUNTRY: USA
ZIP: 92037
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Elliot, Kathryn J.

Ellis, Steven B.

Harpold, Michael M.

TITLE OF INVENTION: HUMAN NEURONAL NICOTINIC ACETYLCHOLINE
RECEPTOR COMPOSITIONS AND METHODS EMPLOYING
                                                                                                         TYPE: nucleic acid
STRANDEDNESS: both
TOPOLOGY: both
MOLECULE TYPE: cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CORRESPONDENCE ADDRESS:
ADDRESSEE: Heller Ehrman White
STREET: 4250 Executive Square,
                                                                                        FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGGCGCTGGCCGCGTCGCTCCTGCACGGTAAAGCCAC 457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGCGCCGGCTCGCTGCAGCTCCGGGACTCAACATGCGCTGCTCGCCGGGAGGCGTCTGGC 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GAGCGGCGAGGTGCCTCTGTGGCCGCAGGCGCAGGCCCGGGCGACAGCCGAGACGTGGAG 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGECGCGGGGGGGGGGGGGGGGGGGCGCGCCTCCTTAAAAGGCGCGCGAGCC
                                                 NAME/KEY: CDS
LOCATION: 73.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CITY: La Jolla
STATE: CA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TAACGCTAACCGCGTCGCTCCTACACGATAAAACCAC 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GAACGACGAAATACCTCTATAACCGCAAACGCAAACCCGAACGACAACCGAAACGTAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: US/09/892,985
                                                                                                                                                                                         LENGTH: 1876 base pairs
```

SAME

```
Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Minimum DB
Maximum DB
                                                                                             a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                uotal number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OM nucleic -
                                                                                                                                                                                                                                                                                                No.
                                                                                                                                                                                                                                                                                                                                                                         Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                              318.6
221.8
127
          62.63
                                                                                                          64.
                                                                                                                                                            67
65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    seq length:
seq length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       nucleic search, using sw model
                                                                                                                                                                                                                                                                                                              Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                110:
112:
12:
13:
14:
15:
16:
          14.7
14.4
14.2
14.1
14.1
14.1
13.8
13.8
13.8
13.7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1537136 seqs, 1149988732 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IDENTITY_NUC Gapop 10.0 , Gapext
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-08-956-518A-94
457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    September 7, 2003, 13:50:30; Search time 249 Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGAACGCAAGGGAGAGGTAG......CTCCTGCACGGTAAAGCCAC 457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Copyright
                                                     956
12733
12739
152331
43058
43058
                                                                                                                                                          114793
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /cgn2_6/ptodata/1/pubpna/US07_PUBCOMB.seq:*
/cgn2_6/ptodata/1/pubpna/PCT_NEW_PUB.seq:*
/cgn2_6/ptodata/1/pubpna/US06_NEW_PUB.seq:*
                                                                                                                                                                                                                                                                                           Length
        43058
1117
41936
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                      jn2_6/ptodata/1/pubpna/US09B_PUBCOMB.seq:*
jn2_6/ptodata/1/pubpna/US09C_PUBCOMB.seq:*
jn2_6/ptodata/1/pubpna/US09C_PUBCOMB.seq:*
jn2_6/ptodata/1/pubpna/US10A_PUBCOMB.seq:*
jn2_6/ptodata/1/pubpna/US10B_PUBCOMB.seq:*
jn2_6/ptodata/1/pubpna/US10_NEW_PUB.seq:*
jn2_6/ptodata/1/pubpna/US10_NEW_PUB.seq:*
jn2_6/ptodata/1/pubpna/US10_NEW_PUB.seq:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /prodata/1/pubpna/USOS NEW PUB.seq:*/ptodata/1/pubpna/USOS PUBCOMB.seq:*/ptodata/1/pubpna/USOS PUBCOMB.seq:*/ptodata/1/pubpna/USO7 NEW PUB.seq:*/ptodata/1/pubpna/PCTUS_PUBCOMB.seq:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /ptodata/1/pubpna/US08_PUBCOMB.seq:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ptodata/1/pubpna/US09A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ptodata/1/pubpna/US08_NEW_PUB.seq:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GenCore version (c) 1993 - 2003
                                                                                                                                                                                                                                                                                                B
     US-10-311-455-1991
US-09-82-985-7
US-09-82-985-7
US-10-3149-836-11
US-10-017-161-1857
US-10-017-161-1857
US-10-017-633-31508
US-10-0127-633-31508
US-10-032-393-8
US-10-035-4456-529
US-09-984-456-529
US-09-980-107-3950
US-10-017-161-1405
US-10-017-161-1405
                                                                                                                                                                                                                                                                                                                                               SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (without alignments)
4221.244 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5.1.6
Compugen Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              _PUBCOMB.seq:*
                                                                                                                              Sequence 1992, Ap
Sequence 7, Appli
Sequence 11, Appl
Sequence 1857, Ap
Sequence 1483, Ap
Sequence 3, Appli
Sequence 3, Appli
Sequence 31508, A
                                                                                                                                                                                                                                                                                         Description
                                    Sequence
Sequence
                                                                   Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                     Sequence 1991, Ap
Sequence 1992, Ap
47, Appl
8, Appli
16, Appl
292, App
529, App
3950, Ap
1403, Ap
116, App
```

RESULT 1 US-10-311-455-1991

ALIGNMENTS

Sequence 1991, Application US/10311455 Publication No. US20030143606A1 GENERAL INFORMATION:

								•			O	ი	ი	Ω	Ω	Ω		a				O	ი	a		a
3	42	41	40	39	38	37	36	35	34	ü	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17
54	54	54	5.4	54	54	54	54	54	54.2		54.4	54.4	54.4	54.4	54.4		54.8	55	56.8	56.8	57.8	58	58	58	59.4	61.4
							11.8	11.8	11.9	11.9	11.9	11.9	11.9	11.9	11.9	11.9	12.0	12.0	12.4	12.4	12.6	12.7	12.7	12.7	13.0	13.4
56516	2000	2000	883	594	594	594	594	594	22005	33023	12425	12425	12425	1614	1614	1614	10144	2678	692	692	922	2561	. 2561	2561	5452	2307
10	10	10	13	15	14	12	12	12	12	10	13	13	10.	13	13	10	10	12	13	13	12	13	13	10	12	11
-09-901-484A-	-09-853-526-1	-09-901-484A-18	27-632-435	46	23-155-1	-10-142-885-1	-10-141-761-1	-10-140	-10-292-198-2	380-107-3	-10-023-523-5	-10-023-529-5	0-5	-10-023-523-4	-10-023-529	-09-976-740	-09-880-107	-10-017-161-1647	0-027-632-3061	-10-027-632-9625	-10-017-161-	0-023-523-	0-023-529-	-09-976-740-	0-017-161-14	US-09-893-519A-87
Seque	Segue	Seque	Seque	Sequei	Sequer	Sequer	Seguer	Sequen	Sequen	Sequen	Sequen	Sequen	Sequen	Sequen	Sequen	Sequen	Sequen	Sequenc	Sequenc	Sequeno	Sequenc	Sequenc	Sequenc	Sequeno	Sequenc	Sequenc
	3 54 11.8 56516 10 US-09-901-484A-1	2 54 11.8 2000 10 US-09-853-526-180 3 54 11.8 56516 10 US-09-901-484A-1	54 11.8 2000 10 US-09-901-484A-180 2 54 11.8 2000 10 US-09-853-526-180 3 54 11.8 56516 10 US-09-901-484A-1	54 11.8 883 13 US-10-027-632-4358 1 54 11.8 2000 10 US-09-901-484A-180 2 54 11.8 2000 10 US-09-853-526-180 54 11.8 56516 10 US-09-901-484A-1	54 11.8 594 15 US-10-146-731-10 54 11.8 883 13 US-10-027-632-4358 1 11.8 2000 10 US-09-901-484A-180 54 11.8 2000 10 US-09-853-526-180 54 11.8 56516 10 US-09-901-484A-1	54 11.8 594 14 US-10-123-155-10 54 11.8 594 15 US-10-146-731-10 54 11.8 883 13 US-10-027-632-4358 54 11.8 2000 10 US-09-901-484A-180 54 11.8 2000 10 US-09-853-526-180 54 11.8 56516 10 US-09-901-484A-1	54 11.8 594 12 US-10-142-885-10 54 11.8 594 14 US-10-123-155-10 54 11.8 594 15 US-10-146-731-10 54 11.8 883 13 US-10-027-632-4358 54 11.8 2000 10 US-09-901-484A-180 54 11.8 2000 10 US-09-883-526-180 54 11.8 56516 10 US-09-901-484A-1	54 11.8 594 12 US-10-141-761-10 54 11.8 594 12 US-10-142-885-10 54 11.8 594 14 US-10-123-155-10 54 11.8 594 15 US-10-146-731-10 54 11.8 883 13 US-10-027-632-4358 54 11.8 2000 10 US-09-901-484A-180 54 11.8 2000 10 US-09-853-526-180 54 11.8 56516 10 US-09-901-484A-1	54 11.8 594 12 US-10-140-472-10 54 11.8 594 12 US-10-142-885-10 54 11.8 594 12 US-10-142-885-10 54 11.8 594 14 US-10-123-155-10 54 11.8 594 15 US-10-146-731-10 54 11.8 883 13 US-10-027-632-4358 11.8 2000 10 US-09-901-482A-180 54 11.8 2000 10 US-09-901-484A-1	54.2 11.9 22005 12 US-10-190-472-10 54 11.8 594 12 US-10-140-472-10 54 11.8 594 12 US-10-141-761-10 54 11.8 594 12 US-10-142-885-10 54 11.8 594 12 US-10-142-885-10 54 11.8 594 15 US-10-146-731-10 54 11.8 594 15 US-10-146-731-10 54 11.8 594 15 US-10-27-632-4358 54 11.8 2000 10 US-09-901-484A-180 54 11.8 2000 10 US-09-853-526-180 54 11.8 56516 10 US-09-901-484A-1	54.4 11.9 33023 10 US-09-880-107-3350 54.2 11.9 22005 12 US-10-292-19-2 54 11.8 594 12 US-10-140-472-10 54 11.8 594 12 US-10-141-761-10 54 11.8 594 12 US-10-142-885-10 54 11.8 594 14 US-10-123-155-10 54 11.8 594 15 US-10-124-731-10 54 11.8 594 15 US-10-146-731-10 54 11.8 594 15 US-10-27-632-4358 54 11.8 2000 10 US-09-853-526-180 54 11.8 2000 10 US-09-901-484A-1	32 54.4 11.9 12425 13 US-10-023-523-50 33 54.4 11.9 33023 10 29-880-107-3350 34 54.2 11.9 23005 12 US-10-292-198-2 35 54 11.8 594 12 US-10-144-72-10 36 54 11.8 594 12 US-10-141-761-10 37 54 11.8 594 12 US-10-141-761-10 38 54 11.8 594 12 US-10-142-855-10 39 54 11.8 594 12 US-10-123-155-10 39 54 11.8 594 12 US-10-123-155-10 39 54 11.8 594 12 US-10-123-155-10 40 54 11.8 594 15 US-10-146-731-10 40 54 11.8 594 15 US-10-27-632-4358 41 54 11.8 2000 10 US-09-901-484A-180 42 54 11.8 2000 10 US-09-901-484A-180 43 54 11.8 56516 10 US-09-901-484A-1	31 54.4 11.9 12425 13 US-10-023-529-50 32 54.4 11.9 12425 13 US-09-80-107-3350 33 54.4 11.9 33023 10 US-09-880-107-3350 34 54.2 11.9 22005 12 US-10-292-198-2 35 54 11.8 594 12 US-10-141-761-10 36 54 11.8 594 12 US-10-142-885-10 37 54 11.8 594 12 US-10-142-885-10 38 54 11.8 594 12 US-10-123-155-10 39 54 11.8 594 12 US-10-123-155-10 39 54 11.8 594 12 US-10-123-155-10 39 54 11.8 594 12 US-10-142-885-10 39 54 11.8 594 12 US-10-123-155-10 39 54 11.8 594 12 US-10-123-155-10 39 54 11.8 594 15 US-10-123-155-10 40 54 11.8 594 15 US-10-123-155-10 41 54 11.8 2000 10 US-09-901-484A-180 42 54 11.8 2000 10 US-09-901-484A-180 43 54 11.8 56516 10 US-09-901-484A-1	30 54.4 11.9 12425 10 US-09-976-740-50 31 54.4 11.9 12425 13 US-10-023-529-50 32 54.4 11.9 12425 13 US-10-023-523-50 33 54.4 11.9 33023 10 US-09-880-107-3350 34 54.2 11.9 32023 10 US-09-880-107-3350 35 54 11.8 594 12 US-10-140-472-10 36 54 11.8 594 12 US-10-141-761-10 37 54 11.8 594 12 US-10-141-761-10 38 54 11.8 594 12 US-10-142-885-10 39 54 11.8 594 14 US-10-123-155-10 39 54 11.8 594 14 US-10-123-155-10 39 54 11.8 594 19 US-10-146-731-10 39 54 11.8 594 19 US-10-27-632-4358 41 54 11.8 2000 10 US-09-901-484A-180 42 54 11.8 2000 10 US-09-901-484A-180 43 54 11.8 56516 10 US-09-901-484A-1	29 54.4 11.9 1614 13 US-10-023-523-45 30 54.4 11.9 12425 10 US-09-976-740-50 31 54.4 11.9 12425 13 US-10-023-529-50 32 54.4 11.9 12425 13 US-10-023-523-50 33 54.4 11.9 12425 13 US-10-023-523-50 34 54.2 11.9 3023 10 US-09-880-107-3350 34 54.2 11.9 22005 12 US-10-292-198-2 35 54 11.8 594 12 US-10-140-472-10 36 54 11.8 594 12 US-10-141-761-10 37 54 11.8 594 12 US-10-142-855-10 38 54 11.8 594 12 US-10-142-855-10 39 54 11.8 594 12 US-10-142-851-10 39 54 11.8 594 13 US-10-142-853-10 40 54 11.8 894 15 US-10-146-731-10 40 54 11.8 803 13 US-10-027-632-4358 41 54 11.8 2000 10 US-09-901-484A-180 42 54 11.8 2000 10 US-09-901-484A-180 43 54 11.8 56516 10 US-09-901-484A-1	28 54.4 11.9 1614 13 US-10-023-529-45 29 54.4 11.9 1614 13 US-10-023-529-45 30 54.4 11.9 1614 13 US-10-023-529-50 31 54.4 11.9 12425 10 US-09-976-740-50 32 54.4 11.9 12425 13 US-10-023-529-50 33 54.4 11.9 12425 13 US-10-023-529-50 34 54.2 11.9 30023 10 US-09-880-107-3350 35 54.4 11.9 32005 12 US-10-292-198-2 35 54 11.8 594 12 US-10-140-772-10 36 54 11.8 594 12 US-10-140-761-10 37 54 11.8 594 12 US-10-142-885-10 39 54 11.8 594 12 US-10-123-155-10 39 54 11.8 594 12 US-10-123-155-10 39 54 11.8 594 12 US-10-123-155-10 39 54 11.8 594 15 US-10-123-155-10 40 54 11.8 594 15 US-10-123-155-10 41 54 11.8 594 15 US-10-123-155-10 42 54 11.8 2000 10 US-09-901-484A-180 43 54 11.8 56516 10 US-09-901-484A-1	54.4 11.9 1614 10 US-09-976-740-45 54.4 11.9 1614 13 US-10-023-529-45 9 54.4 11.9 1614 13 US-10-023-529-45 9 54.4 11.9 12425 10 US-09-976-740-50 0 54.4 11.9 12425 13 US-10-023-529-50 1 54.4 11.9 12425 13 US-10-023-529-50 2 54.4 11.9 12425 13 US-10-023-529-50 2 54.4 11.9 3023 10 US-09-880-107-3350 3 54.4 11.9 3023 10 US-09-880-107-3350 3 54.4 11.9 22005 12 US-10-292-198-2 5 54 11.8 594 12 US-10-140-472-10 6 54 11.8 594 12 US-10-141-761-10 7 54 11.8 594 12 US-10-142-885-10 8 54 11.8 594 15 US-10-123-155-10 9 54 11.8 594 15 US-10-146-731-10	26 54.8 12.0 10144 10 US-09-880-107-2168 27 54.4 11.9 1614 11 US-09-976-740-45 28 54.4 11.9 1614 11 US-10-023-529-45 29 54.4 11.9 1614 11 US-10-023-529-45 30 54.4 11.9 12425 11 US-10-023-529-50 31 54.4 11.9 12425 11 US-10-023-529-50 32 54.4 11.9 12425 11 US-10-023-529-50 32 54.4 11.9 12425 11 US-10-023-529-50 34 54.2 11.9 33023 11 US-10-023-529-50 35 54.4 11.9 33023 11 US-09-880-107-3350 36 54 11.8 2900 12 US-10-140-472-10 37 54 11.8 594 12 US-10-140-472-10 38 54 11.8 594 12 US-10-142-885-10 39 54 11.8 594 14 US-10-142-85-10 39 54 11.8 594 15 US-10-142-835-10 40 54 11.8 594 15 US-10-142-835-10 41 54 11.8 893 13 US-10-027-632-4358 41 54 11.8 2000 11 US-09-853-526-180 42 54 11.8 2000 10 US-09-901-484N-18	25 54.8 12.0 2678 12 US-10-017-161-1647 26 54.8 12.0 1,0144 10 US-09-880-107-2168 27 54.4 11.9 1614 10 US-09-880-107-2168 28 54.4 11.9 1614 13 US-10-023-529-45 29 54.4 11.9 1614 13 US-10-023-523-45 29 54.4 11.9 1614 13 US-10-023-523-45 30 54.4 11.9 12425 10 US-09-976-740-50 31 54.4 11.9 12425 13 US-10-023-523-50 32 54.4 11.9 12425 13 US-10-023-523-50 33 54.4 11.9 12425 13 US-10-023-523-50 34 54.2 11.9 33023 10 US-09-880-107-3350 34 54.2 11.9 3203 10 US-09-880-107-3350 35 54.4 11.8 594 12 US-10-140-472-10 36 54 11.8 594 12 US-10-142-885-10 37 54 11.8 594 12 US-10-123-155-10 38 54 11.8 594 12 US-10-142-885-10 39 54 11.8 594 12 US-10-123-155-10 40 54 11.8 594 15 US-10-146-731-10 54 11.8 594 15 US-10-146-731-10 55 11.8 594 15 US-10-146-731-10 56 11.8 2000 10 US-09-901-484A-180 42 54 11.8 2000 10 US-09-901-484A-1	24 56.8 12.4 692 13 US-10-027-632-306160 25 55 12.0 2678 12 US-10-017-161-1647 26 54.8 12.0 10144 10 US-09-880-107-2168 27 54.4 11.9 1614 10 US-09-976-740-45 28 54.4 11.9 1614 13 US-10-023-529-45 29 54.4 11.9 1614 13 US-10-023-523-45 30 54.4 11.9 12425 10 US-09-976-740-50 31 54.4 11.9 12425 10 US-09-976-740-50 32 54.4 11.9 12425 13 US-10-023-523-50 33 54.4 11.9 12425 13 US-10-023-523-50 34 54.2 11.9 12425 13 US-09-880-107-3350 35 54 11.9 22005 12 US-10-292-198-2 35 54 11.8 594 12 US-10-140-472-10 36 54 11.8 594 12 US-10-142-885-10 39 54 11.8 594 12 US-10-123-155-10 39 54 11.8 594 12 US-10-123-155-10 39 54 11.8 594 12 US-10-123-155-10 39 54 11.8 594 12 US-10-164-731-10 39 54 11.8 594 15 US-10-164-731-10 40 54 11.8 2000 10 US-09-901-484N-180 41 54 11.8 56516 10 US-09-901-484N-1	23 56.8 12.4 692 13 US-10-027-632-96253 24 56.8 12.4 692 13 US-10-027-632-96160 25 55 12.0 2678 12 US-10-017-161-1647 26 54.8 12.0 1.0144 10 US-09-880-107-2168 27 54.4 11.9 1614 13 US-10-023-523-45 28 54.4 11.9 1614 13 US-10-023-523-45 29 54.4 11.9 12425 10 US-09-976-740-50 31 54.4 11.9 12425 10 US-09-976-740-50 31 54.4 11.9 12425 13 US-10-023-523-50 32 54.4 11.9 12425 13 US-10-023-523-50 33 54.4 11.9 12425 13 US-10-023-523-50 34 54.2 11.9 33023 10 US-09-880-107-3350 35 54 11.8 3023 10 US-09-880-107-3350 36 54 11.8 594 12 US-10-144-72-10 37 54 11.8 594 12 US-10-144-781-10 38 54 11.8 594 12 US-10-142-885-10 39 54 11.8 594 15 US-10-27-632-4358 41 54 11.8 2000 10 US-09-901-484N-180 42 54 11.8 56516 10 US-09-901-484N-1	22 57.8 12.6 922 12 US-10-017-161-1435 23 56.8 12.4 692 13 US-10-027-632-96253 24 56.8 12.4 692 13 US-10-027-632-96253 24 56.8 12.4 692 13 US-10-027-632-906160 25 55 12.0 2678 12 US-10-017-161-1647 26 54.8 12.0 1.0144 10 US-09-880-107-2168 27 54.4 11.9 1614 11 US-09-890-107-2168 28 54.4 11.9 1614 13 US-10-023-529-45 29 54.4 11.9 1614 13 US-10-023-529-50 31 54.4 11.9 12425 10 US-09-976-740-50 31 54.4 11.9 12425 13 US-10-023-523-50 32 54.4 11.9 12425 13 US-10-023-523-50 33 54.4 11.9 12425 13 US-10-023-523-50 34 54.2 11.9 3023 10 US-09-880-107-3350 35 54.4 11.9 3023 10 US-09-880-107-3350 36 54 11.8 594 12 US-10-140-472-10 36 54 11.8 594 12 US-10-140-485-10 37 54 11.8 594 12 US-10-142-885-10 39 54 11.8 594 12 US-10-123-155-10 40 54 11.8 594 15 US-10-123-155-10 40 54 11.8 594 15 US-10-123-155-10 41 54 11.8 2000 10 US-09-901-484A-180 42 54 11.8 2000 10 US-09-901-484A-180 43 54 11.8 56516 10 US-09-901-484A-1	58 12.7 2561 13 US-10-023-523-48 12.6 922 12 US-10-017-161-1435 2.3 48 12.4 692 13 US-10-027-632-96253 2.4 56.8 12.4 692 13 US-10-027-632-306160 2.5 51.0 26.78 12.0 10.14 10 US-10-017-2168 12.0 10.14 10 US-09-880-107-2168 12.0 10.14 10 US-09-976-740-45 2.5 54.4 11.9 1614 13 US-10-023-523-45 2.5 54.4 11.9 1614 13 US-10-023-523-45 2.5 54.4 11.9 1614 13 US-10-023-523-53 2.5 54.4 11.9 12425 10 US-09-976-740-50 3.2 54.4 11.9 12425 10 US-09-976-740-50 3.3 54.4 11.9 12425 13 US-10-023-523-50 3.3 54.4 11.9 12425 13 US-10-123-155-10 3.6 54 11.8 594 12 US-10-140-472-10 3.6 54 11.8 594 12 US-10-142-885-10 3.9 54 11.8 594 12 US-10-142-885-10 3.9 54 11.8 594 12 US-10-142-885-10 3.9 54 11.8 594 15 US-10-123-155-10 3.9 54 11.8 594 15 US-10-142-885-10 3.9 54 11.8 594 15 US-10-142-83-13-10 3.9 54 11.8 594 15 US-10-144-731-10 3.9 54 11.8 594 15 US-10-144-7	20 58 12.7 2561 13 US-10-023-529-48 22 57.8 12.6 922 12 US-10-017-161-1435 23 56.8 12.4 692 13 US-10-027-632-96253 24 56.8 12.4 692 13 US-10-027-632-96253 24 56.8 12.4 692 13 US-10-027-632-96253 24 56.8 12.0 2678 12 US-10-017-161-1647 26 54.8 12.0 10144 10 US-09-80-107-2168 27 54.4 11.9 1614 13 US-10-023-529-45 29 54.4 11.9 1614 13 US-10-023-529-50 34 11.9 12425 10 US-09-976-740-50 31 54.4 11.9 12425 11 US-10-023-529-50 32 54.4 11.9 12425 13 US-10-023-529-50 32 54.4 11.9 12425 13 US-10-023-529-50 34 54.2 11.9 12425 13 US-10-023-523-50 34 54.2 11.9 12425 13 US-10-023-523-50 34 54.2 11.9 12425 13 US-10-023-523-50 35 54 11.8 594 12 US-10-140-472-10 36 54 11.8 594 12 US-10-140-472-10 36 54 11.8 594 12 US-10-142-885-10 39 54 11.8 594 12 US-10-142-885-10 39 54 11.8 594 15 US-10-123-155-10 39 54 11.8 594 15 US-10-27-632-4358 41 1.8 2000 10 US-09-901-484N-180 42 54 11.8 2000 10 US-09-901-484N-180 43 54 11.8 56516 10 US-09-901-484N-1	19 58 12.7 2561 13 US-10-92-976-740-48 21 58 12.7 2561 13 US-10-023-529-48 22 57.8 12.6 922 12 US-10-017-161-1435 23 56.8 12.4 692 13 US-10-027-632-96253 24 56.8 12.4 692 13 US-10-027-632-96160 25 54.4 11.9 1614 10 US-10-976-740-45 29 54.4 11.9 1614 11 US-10-976-740-45 29 54.4 11.9 1614 13 US-10-023-529-45 29 54.4 11.9 1614 13 US-10-023-529-45 29 54.4 11.9 12425 10 US-09-976-740-50 31 54.4 11.9 12425 10 US-09-976-740-50 31 54.4 11.9 12425 11 US-10-023-529-50 31 54.4 11.9 12425 11 US-10-023-529-50 31 54.4 11.9 12425 11 US-10-023-529-50 31 54.4 11.9 12425 11 US-09-976-740-50 31 54.4 11.9 12425 11 US-09-976-740-50 31 54.4 11.9 12425 11 US-09-980-107-3350 34 54.2 11.9 3203 11 US-09-880-107-3350 34 54.2 11.9 3203 11 US-09-880-107-3350 35 54 11.8 594 12 US-10-140-472-10 36 54 11.8 594 12 US-10-142-885-10 39 54 11.8 594 12 US-10-123-155-10 39 54 11.8 2000 10 US-09-901-484N-180 42 54 11.8 2000 10 US-09-901-484N-180 43 54 11.8 56516 10 US-09-901-484N-1	18 59.4 13.0 5452 12 US-10-017-161-1481 19 58 12.7 2561 110 US-09-976-740-48 20 58 12.7 2561 13 US-10-023-523-48 21 58 12.7 2561 13 US-10-023-523-48 22 57.8 12.6 922 12 US-10-017-161-1435 23 56.8 12.4 692 13 US-10-027-632-306160 25 54.8 12.0 26.78 12 US-10-017-161-1647 26 54.8 12.0 10144 10 US-09-800-107-2168 27 54.4 11.9 1614 13 US-10-023-529-45 28 54.4 11.9 1614 13 US-10-023-529-45 29 54.4 11.9 1614 13 US-10-023-523-45 29 54.4 11.9 1614 13 US-10-023-523-50 30 54.4 11.9 12425 10 US-09-976-740-50 31 54.4 11.9 12425 13 US-10-023-523-50 32 54.4 11.9 12425 13 US-10-023-523-50 33 54.4 11.9 12425 13 US-10-023-523-50 34 54.2 11.9 22005 12 US-10-140-72-10 36 54 11.8 594 12 US-10-140-731-10 37 54 11.8 594 12 US-10-142-885-10 39 54 11.8 594 12 US-10-123-155-10 39 54 11.8 594 12 US-10-142-885-10 39 54 11.8 594 15 US-10-143-61-10 40 54 11.8 2000 10 US-09-901-484N-180 41 54 11.8 2000 10 US-09-901-484N-180 42 54 11.8 56516 10 US-09-901-484N-1

; OTHER INFORMATION: chemically treated genomic DNA (Homo sapiens) US-10-311-455-1991 CURRENT APPLICATION NUMBER: US/10/311,455 CURRENT FILING DATE: 2002-12-16 PRIOR APPLICATION NUMBER: PCT/EP01/07537 PRIOR FILING DATE: 2001-07-02 PRIOR APPLICATION NUMBER: DE 10032529.7 PRIOR FILING DATE: 2000-06-30 PRIOR APPLICATION NUMBER: DE 10043826.1 PRIOR FILING DATE: 2000-09-01 NUMBER OF SEQ ID NOS: 2424 SEQ ID NO 1991 LENGTH: 5304 Matches 369; Query Match TITLE OF INVENTION: Diagnosis of Diseases Associated with the Immune System by Dete: TITLE OF INVENTION: cytosine methylation FILE REFERENCE: 5013.1014 APPLICANT: OLEK, Alexander APPLICANT: PIEPENBROCK, CAPPLICANT: BERLIN, Kurt ORGANISM: Artificial Sequence FEATURE: TYPE: DNA Local Similarity 61 1 AGAACGCAAGGGAGAGGTÄGAGCCTGGCCTTGGGCAGAGGCCCG AGAACGTAAGGGAGAGGTAGAGTTTGGTTTTGGGTAGTTTTTGGTTTAGAGGCGCG AGGTCGAGAGTTCGTTCGGTGGAGATTGGGGGTGGAGGTGTTCGGAGCGTATTTAGCGTC 4728 AGGCCGAGAGCCCGCTCGGTGGAGACTGGGGGGTGGAGGTGCCCGGAGCGTACCCAGCGCC PIEPENBROCK, Christian BERLIN, Kurt Conservative 69.7%; 81.5%; 0 Score 318.6; DB Pred. No. 3.4e-61 Mismatches DB 12; Indels Length 5304; ٥, Gaps 120 4668 60

Ś 밁

```
SOURCE
ORGANISM
                                                                                                                                                                                             ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                CNS 04 CNH
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              멂
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             吊
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BASE COUNT
ORIGIN
REFERENCE
                                                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         615
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           207;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               14 GAGGTAGAGCCTGGCCTTGGGCAGCCCCTGGCCTGGCCAGAGGCGCGAGAGCCCGAGAGCCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    High
High
                 Tetraodon nigroviridis
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
Acanthomorpha; Acanthopterygii; Percomorpha; Tetraodontiformes;
Tetradontoidea; Tetraodontidae; Tetraodon.
                                                                                                                                                             GSS; genome survey sequence
Tetraodon nigroviridis
                                                                                                                                                                                                                                                                                                        Tetraodon nigroviridis genome surve 099J04 of library G from Tetraodon
                                                                                                                                                                                                                                                                                                                                                                   CNS 04 CNH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Class: BAC ends
                                                                                                                                                                                                                           AL284678.1 GI:8023072
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  19.0%;
Similarity 49.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Seq primer: RM1 TACGACTCACTATAGGGAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ດ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ccrcrereeccecaeecceeecceeecaacaecceaeaeaecereececeeccee
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GATGGCGGGGGGGACGGGGGGGGGGGGGCTCGTCACGTGGAGAGGCGCGCGGGGG 253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCTCACACCTCGGGCTGCAGTTCCCTGGGTGGCCGCGAGACGCTGGCCCGGGCTGGAGG 193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GCTCGGTGGAGACTGGGGGTGGAGGTGCCCGGAGCGTACCCAGCGCCGGGAGTACCTCCC 133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cedecedescededecedescentrantacedescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescentescen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    quality sequence start: 25 quality sequence stop: 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note="Vector: pTARBAC2.1; Site_1: EcoRI; Site_2: EcoRI; CH261 Female Chicken library - For library and clone ordering information: http://www.chori.org/bacpac" 748 c 341 g 35 t 45 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /mol_type="genomic_DNA"
/strain="Red.Jungle Fowl"
/db_xref="taxon:9031"
/clone="CH261-138F22"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    organism="Gallus gallus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              line="UCD001, inbred
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 87; DB 29;
Pred. No. 9.7e-06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches 214; Indels
                                                                                                                                                                                                                                                                                                                                                                549 bp
                                                                                                                                                                                                                                                                                                                                      survey sequence
                                                                                                                                                                                                                                                                                                        DNA linear (
ey sequence T7 end
nigroviridis, geno
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              256"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 1198;
                                                                                                                                                                                                                                                                                                     end of clone
genomic survey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             316
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
```

```
PUBMED
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                       밁
                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
밁
                                        Ş
                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      source
                                                                                                                                                                                                                                                                                                                                  300
                                                                                                          420
                                                                                                                                                              310
                                                                                                                                                                                                                    360
                                                                                                                                                                                                                                                                        250
                                                                                                                                                                                                                                                                                                                                                                                        190
                                                                                                                                                                                                                                                                                                                                                                                                                                         240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    120
480
                                                      370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    196;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Fizames, C., Fischer, C., Bouneau, L., Billault, A., Que Saurin, W., Bernot, A. and Weissenbach, J. Characterization and repeat analysis of the compact freshwater pufferfish Tetraodon nigroviridis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        This sequence is a single read and was generated as scale clone-end sequencing project of the Terraodon genome. For more information, please take a look at http://www.genoscope.cns.fr/Terraodon.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Roest Crollius, H., Jaillon, O., Dasilva, C., Ozouf-Costaz, C., Fizames, C., Fischer, C., Bouneau, L., Billault, A., Quetier, F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Bernot, A., Fizames, C., Wincker, P., Saurin, W. and Weissenbach, J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Roest Crollius, H., Jaillon, O., Dasilva, C., Bouneau, L., Fisher, C.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BP 191 91006 EVRY cedex -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Submitted (12-APR-2000) Genoscope -
BP 191 91006 EVRY cedex - FRANCE (E-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Estimate of human gene number provided by using Tetraodon nigroviridis DNA sequence Nat. Genet. 25 (2), 235-238 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Direct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Genoscope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Genome Res. 10 (7), 939-949 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0359837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0899143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0835645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCCCGCTCACACCTCGGGCTGCAGTTCCCTGGGTGGCCGGAGACGCTGGCCCGGGCTG
                                                                                                                                                                                                                                                                                                                                  cadadescadas de cadades de cadades
                                                                                                                                                                                                                                                                                                                                                                                        GAGGGATGGCGGGGCGGGGCGGGGCGGGGCTCGTCACGTGGAGAGGCGCGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                            gcccgcrcggrgagacrgggggrgaggrgcccggagcgracccagcgcccggaagracc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGGAGAGGTAGAGCCTGGCCTTGGGCAGCCCCTGGCCTGGCCAGAGGCCGAGGCCGAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Web : www.genoscope.cns.fr)
  TSGGGGAGACGCGATGTGCGCGTGTGCGTGGCTGAGGGGGGAGCG
                                                                                                          GGGGCGGGCGGGGGGGGCGCGCCCCGGCTTAAAAGGCGCGCGAGCCGAGCGGCGA
                                                   TCGCTGCAGCTCCGGGACTCAACATGCGCTGCTCGCCGGGAGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (bases 1 to 549)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /clone_lib="G"
/note="Genoscope sequence
81 c 407 g 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organism="Tetraodon nigroviridis"
/mol type="genomic DNA"
/db xref="taxon:99883"
/clone="099J04"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         . 549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           18.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 86.2; DB 29;
Pred. No. 1.4e-05;
3; Mismatches 196;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    e - Centre
(E-mail :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ID : COBG099DE02LP1~end t 25 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Brottier, P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              generated as part of a large
the Tetraodon nigroviridis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     genome-wide analysis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              National de
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    seqref@genoscope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Quetier, F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           549;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      genome of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequencage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ••
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .cns.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           T7"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   129
                                                                                                                479
                                                                                                                                                                                                                          419
                                                                                                                                                                                                                                                                              309
                                                                                                                                                                                                                                                                                                                                                                                        249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                69
                                                                                                                                                                                                                                                                                                                                  359
                                                                                                                                                                                                                                                                                                                                                                                                                                               299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
```

Search completed: September Job time : 2272 secs

2003,

15:14:42

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
AUTHORS
TITLE
                                                                                                             VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOURCE
ORGANISM
                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BASE COUNT
ORIGIN
                                                                                                SOURCE
                                                                                                                                            ACCESSION
                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                        BX403654
                                                                                                                                                                                                                         RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local
                                                                               ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                    .1atches
                                                                                                                                                                                                                                                                                                       414
                                                                                                                                                                                                                                                                                                                                                       354 CGTGGAGCGCGCCGGCTGCAGCTCCGGGACTCAACATGCGCTGCTCGCCCGGGAGGC 413
                                                                                                                                                                                                                                                                         61
                                                                                                                                                          BX403654
3-PRIME,
                                                                                                                    BX403654
BX403654.1 GI:30762430
1 (bases 1 to 1103)
Li,W.B., Gruber,C., Jessee,J.
Full-length cDNA libraries an
                                            Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                    88; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov
Plate: LLAM11620 row: e column: 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 (bases 1 to 651)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
                                                                             Homo sapiens
                                                                                                                                                                                         BX403654
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Tissue Procurement: Life Technologies, Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens (human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BI917899
BI917899.1 GI:16181580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          High quality sequence stop: 647.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Email: cgapbs-r@mail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Unpublished
                                                                                              Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Contact: Robert Strausberg, Ph.D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               603181651F1 NIH_MGC_121 Homo sapiens cDNA clone IMAGE:5245812
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can
                                                                                                                                                                                                                                                                      GICTGGCTGGCGCTGGCTCC
                                                                                                                                                                                                                                                                                                       GTCTGGCTGGCGCTGGCGTCGCTCC 441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   137
                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /clone lib="NIH_MGC_121"
//note="Organ: brain; Vector: pCMV-SPORT6; Site 1: Not!;
//note="Organ: brain; Vector: pCMV-SPORT6; Site 1: Not!;
Site 2: ECORV (destroyed); RNA source anonymous pool of 3
fetal brains, female age 20 weeks, female age 24 weeks,
and male age 26 weeks. Library is oligo-dT primed and
directionally cloned (EcoRV site is destroyed upon
cloning). Average insert size 1.7 kb, insert size range
0.7-3.5 kb. Library is normalized and enriched for
full-length clones and was constructed by C. Gruber
(Invitrogen). Research Genetics tracking code 017. Note:
this is a NIH MGC Library."
37 a 188 c 182 g 144 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ည
                                                                                                                                                          mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:5245812"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                             19.3%; out
100.0%; Pr
                                                                                                                                                        sapiens PLACENTA Homo sapiens CDNA clone CLOBA007ZH12 sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                  Score 88; DB; Pred. No. 6.8
                                                                                                                                                                                         1103 bp
                                           Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                       88
                                                                                                                                                                                                                                                                                                                                                                                                DB 12; I
. 6.8e-06;
ches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                Length 651;
                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Collection (MGC)
                                                                                                                                                                                    EST 15-MAY-2003
                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ű
                                                                                                                                                                                                                                                                                                                                   60
                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                       REFERENCE
AUTHORS
                                                                                                                                                                                                                                                   ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                RESULT 14
CC190008/c
                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                               문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                             COMMENT
                                                                                                                                                                                                                                                                                                   DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMMENT
                                                                                                                                                                                                                                    KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                        JOURNAL
                                                                                           TITLE
                                                                                                                                                                                                       ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     source
                                                                                                                                                                                                                                                                                                                                                                                                  449
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          103;
                                                                                                                                                                                                                                                     CC190008.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         194
```

```
Archosauria; Aves; Neognathae; Ga
Phasianinae; Gallus.
1 (bases 1 to 1198)
Kremitzki,C., Higginbotham,J., Wy
Warren,W., Graves,T., Mardis,E. a
Gallus gallus BAC End Reads
Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   324 CGCAGGCGCAGGCCCGGGCGACAGCCGAGACGTGGAGCGCGCCGGCTCGCTGCAGCTCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      144 CGGGCTGCAGTTCCCTGGGTGGCCGCCGAGACGCTGGCCCGGGCTGGAGGGATGGCGGG
                                                                                                                                                                                                         Gallus gallus
Eukaryota; Metazoa, Chordata; Craniata; Vertebrata; Euteleostomi;
Archosauria; Aves; Neognathae; Galliformes; Phasianidae;
                                      Genome Sequencing Center
Washington University School of Medicine
                                                                                                                                                                                                                                                                                                                                                   genomic survey sequence.
CC190008
                                                                                                                                                                                                                                                                                                                                                                                            CC190008 1198 bp. CH261-138F22_RM1.1 CH261 Gallus
                                                                                                                                                                                                                                                                                         Gallus gallus (chicken)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BP 191 91006 EVRY cedex - France
Email: segref@genoscope.cns.fr
Library was constructed by Life Technologies, a division of
Invitrogen. Contact: Feng Liang Email: fliang@lifetech.com U
http://fulllength.invitrogen.com/ InVitroGen Corporation 1600
Faraday Avenue Genoscope sequence ID: CLOBA007ZH12FP1.
                                                                                Contact: Richard K. Wilson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unpublished
Contact: Genoscope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity 35.0
03; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Genoscope - Centre National de Sequencage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          submissions@watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /tissue_type="PLACENTA"
/clone_lib="Homo sapiens pLACENTA"
/clone_lib="Homo sapiens pLACENTA"
/note="Vector: pCMVSPORT 6; 1st strand cDNA was primed
with a NotI-oligo(aT) primer. Five prime end enriched,
double-strand cDNA was digested with Not I and cloned i
the Not I and EcoRV sites of the pCMVSPORT 6 vector.
Library was not normalized."

34 c 310 g 269 t 296 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /clone="CL0BA007ZH12"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                  GI:30434823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    19.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 80;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 87; DB 13;
Pred. No. 9.7e-06;
Std Error: 0.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                            Wylie,K., Carter,J., and Wilson,R.
                                                                                                                                                                                                                                                                                                                                                                                          gallus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 106; Indels
                                                                                                                                                                                                                                                                                                                                                                                          linear (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 1103;
                                                                                                                                                                McPherson, J.,
                                                                                                                                                                                                                                                                                                                                                                                            GSS 08-MAY-2003
CH261-138F22,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                URL:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      263
```

```
RESULT 11
AG128304
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 10
AL530299
LOCUS
                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                          BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
VERSION
                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                             KEYWORDS
                                                                                                             VERSION
                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EYWORDS
                                                                                                                          CCESSION
   AUTHORS
                                                                ORGANISM
                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                              atches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1093
                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                      328
                                                                                                                                                                                                                                                                                                                                                             114;
                                                                                                                                                                                                                                                                                                 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cgi-bin/cluster.cgi?seq=CSODD007CH03QP1&cluster=7646.r. Contact Feng Liang Email : fllang@llfetech.com URL : http://fulllength.invitrogen.com/ InVitroGen Corporation 1600 Faraday Avenue Genoscope sequence ID : CSODD007CH03QP1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Email: segref@genoscope.cns.fr, Web : www.genoscope.cns.fr was normalized. Library was constructed by Life Technologies, a division of Invitrogen. This sequence belongs to sequence cluster
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 (bases 1 to 1201)
Li,W.B., Gruber.C., Jessee,J. and Polayes,D.
Full-length cDNA libraries and normalization
Unpublished
On Feb 13, 2001 this sequence version replace
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AL530299 Homo sapiens NEUROBLASTOMA COT 50-NORM CDNA Clone CSODD007YP05 5-PRIME, mRNA sequence.
                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Pan.
                                                             Pan troglodytes
                                                                                                                          Pan troglodytes DNA, clone: AG128304
                                                                                                                                                          AG128304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       7646.r For more information about this cluster, see http://www.genoscope.cns.fr/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Genoscope - Centre National de Sequencage
BP 191 91006 EVRY cedex - France
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AL530299
 Fujiyama,A.,
                                                                                                             AG128304.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Contact: Genoscope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AL530299.2
                                                                                                                                                                                                                                                                                                                      GGCGCAGGCCCGGGCGACAGCCGAGACCGTGGAGCCGCCCGGCTTCGCTGCAGCTCCGGGAAC
                                                                                                                                                                                                                                      TCAACATGCGCTGCCCGGGAGG-TNCTGGCTGGCGCTGGCGCGTCGCTCCTGCACG
                                                                                                                                                                                                                                                                                                GGCGCAGGCCCGGGCGACA-CGAAGACGTGGAGCGCGCGCGGCTCGCTGCAGCTCCGGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGCCCSCCCC 1102
                                                                             troglodytes (chimpanzee)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          sapiens
                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                  /tissue_type="NEUROBLASTOMA COT 50-NORMALIZED"
/clone_Tib="Homo sapiens NEUROBLASTOMA COT 50-NORMALIZED"
/note="Ist strand cDNA was primed with a NotI-oligo (dT)
primer. Five prime end enriched, othe-strand cDNA was
digested with Not I and cloned into the Not I and EcoR V
sites of the pCMVSPORT 6 vector. Library was normalized."

326 c 319 g 273 t 25 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /clone="CS0DD007YP05"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2001 this sequence version replaced
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GI:31068132
                                                                                                           GI:16657469
Hattori, M., Toyoda, A., Taylor, T.D., Yada, T.,
                                                                                                                                                                                                                                                                                                                                                                        19.7%;
95.0%;
                                                                                                                                                                                                                                                                                                                                                           <u>,,</u>
                                                                                                                                                                                                                                                                                                                                                                      Score 90.2; DB 9;
Pred. No. 2.8e-06;
                                                                                                                                                        1023
                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                        PTB-139G20.R,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                mRNA linear ES
A COT 50-NORMALIZED
                                                                                                                                     linear GSS 04-NOV-200
genomic survey sequence
                                                                                                                                                                                                                                                                                                                                                                                      Length 1201;
                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              gi:12793792
                                                                                                                                                     GSS 04-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EST 23-MAY-2003
                                                                                                                                                                                                                                                                                                                                                           'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo
                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                      179
                                                                                                                                                                                                                                                                 447
                                                                                                                                                                                                                                                                                                120
RESULT 12
BI917899
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
JOURNAL
REFERENCE
                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                        밁
                                                                                                                                                                    Ş
                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches 199;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  source
                                                                                                                                                                                                                                                                                                                             449
                                                                                                                                                                                                                                                                                                                                                                                        389
                                                                             689
                                                                                                        430
                                                                                                                                        629
                                                                                                                                                                     370
                                                                                                                                                                                                     569
                                                                                                                                                                                                                                  310
                                                                                                                                                                                                                                                                 509
                                                                                                                                                                                                                                                                                            250
                                                                                                                                                                                                                                                                                                                                                         190
                                                                                                                                                                                                                                                                                                                                                                                                                       130
                                                                                                                                                                                                                                                                                                                                                                                                                                                    329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10
 BI917899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        clone tracking errors.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BAC end sequences of Library PTB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Totoki,Y., Watanabe,H. and Sakaki,Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequencing: M13Rev
LIBRARY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Inpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIMERS
                                                                             റ്റ
                                                                                                          CCG 432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (bases 1 to 1023)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               R.Site 1
R.Site 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Vector
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /mol_type="genomic bit
/db_xref="taxon:9598"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       'sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   clone="PTB-139G20.R"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            19.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              : pKS145
: SacI
: SacI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
đđ
```

```
Submitted (02-AUG-2001) Asao Fujiyama, The Institute of Physical and Chemical Research (RIKEN), Genomic Sciences Center (GSC); 1-7-22 Suehiro-chou, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan (B-mail:chimpbes@gsc.riken.go.jp, URL:http://hgp.gsc.riken.go.jp/, Tel:81-45-503-9111, Fax:81-45-503-9170)
Clones are derived from the chimpanzee BAC library PTB This BAC end was generated during the R&D process and may have higher chance of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Fujiyama,A., Hattori,M., Toyoda,A., Totoki,Y., Watanabe,H. and Sakaki,Y. Direct Submission
GGTGCCTCTGTGGCCGCAGGCGCAGGCCCGGGCGACAGCCGAGACGTGGAGCGCGCCGGC 369
                                                                                                                                                                                                                                  GGGGCGGGCGGGGGGGGCGCGCCCCGGCTCCTTAAAAGGCGCGCGAGCCGAGCGGCGA 309
                                                                                                                                                                                                                                                                                 GAGGGATGGCGGGGGGACGGGGCGGGGCGGGGCTCGTCACGTGGAGAGGCGCGCG
                                                                                                                                                                                                                                                                                                                                                                              TCCCGCTCACACCTCGGGCTGCAGTTCCCTGGGTGGCCGCGAGACGCTGGCCCGGGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCCCGCTCGGTGGAGACTGGGGGGTGGAGGTGCCCGGAGCGTACCCAGCGCCGGGAGTACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGGAGAGGTAGAGCCTGGCCTTGGGCAGCCCCTGGCCTAGACGCCGAGAGGCCGAGA 69
                                                                                                                                                                                      GGNNNNNGGGGGNGGGGGGGGGGGGGGGGCGCGCGCGNGCGGGGGCGGGCGGGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /cell_type="lymphoblast"
/clone_lib="PTB Chimpanzee Male
196 c 649 g 56 t 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Pan troglodytes"
/mol_type="genomic DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 88.6; DB 29
Pred. No. 5.2e-06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Taylor, T.D., Yada, T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  224;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              29;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BAC Library"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 1023;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  <u>,,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                           189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      129
                                            429
                                                                                           628
                                                                                                                                                                                   895
                                                                                                                                                                                                                                                                                 508
                                                                                                                                                                                                                                                                                                                             249
                                                                                                                                                                                                                                                                                                                                                                            448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    328
883
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
```

mRNA

linear

EST 16-OCT-2001

GSS 26-JUL-1999

```
8
                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
TITLE
                                                                                        5
                                                                                                                                   밁
                                                                                                                                                                Ş
                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
VERSION
                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                    B
     RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local S
Matches 143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   URES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               source
                                                                                                                                   463
                                                                                                                                                                      361
                                                                                                                                                                                                            403
                                                                                                                                                                                                                                               301
                                                                                                                                                                                                                                                                                    343
                                                                                                                                                                                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          105
                                                          523
                                                                                              421
                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                                               285
                                                                                                                                                                                                                                                                                                                                                                                                                                     225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Email: segref@genoscope.cns.fr, Web: www.genoscope.cns.fr
Library was constructed by Life Technologies, a division of
Invitrogen. Contact: Feng Liang Email: fliang@lifetech.com |
http://fulllength.invitrogen.com/ Invitroden Corporation 1600
Faraday Avenue Genoscope sequence ID: CSOCAP004BE10QP1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mammalia; Eutheria; Primates; Catarrhini; Ho
1 (bases 1 to 982)
Li,W.B. Gruber C. Jessee,J. and Polayes,D.
Full-length cDNA libraries and normalization
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BX415111
BX415111.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Genoscope - Centre National de Sequencage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Contact: Genoscope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                      CCCMGGGCCCCSCGCCSSCCC 543
                                                                                                                                                                                                                                               GAGCGGCGAGGTGCCTCTGTGGCCGCAGGCGCAGGCCCGGGCGACAGCCGAGACGTGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                     GGGGSCCSSVSGSGSCCCCSSSCGKCCCCGKCCCCCCCGGGSGGGGCCCCSSSSSSCCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGGAGTACCTCCCGCTCACACCTCGGGCTGCAGTTCCCTGGGTGGCCGCCGAGACGCTGG 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGAACGCAAGGGAGAGGTAGAGCCTGGCCTTGGGCAGCCCCTGGCCTGGCCAGAGGCGCG
                                                                                                                                   GGSCCSSGGGGGCCCCGGGGSCGGGGGGGGGGGCGSSCGSSCGSCCCGGC
                                                                                                                                                                  CGCGCCGGCTCGCAGCTCCGGGACTCAACATGCGCTGCTCGCCGGGAGGCGTCTGGC
                                                                                                                                                                                                                                                                                  SSCSSSSGCCSGSCSCSGGGGSSSSCSCSSSCSCSSSGGGGGSSSSGGGGSSS
                                                                                                                                                                                                                                                                                                                       AGGCGCGCGGGGGCGGGGCGGGGCGCGCCCCCTTAAAAGGCGCGCGAGCC
                                                                                                                                                                                                                                                                                                                                                                                              CCCGGGCTGGAGGGATGGCGGGGGCGGGGGCGGGGCTCGTCACGTGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGGCCGAGAGCCCGCTCGGTGGAGACTGGGGGGTGGAGGTGCCCGGAGCGTACCCAGCGCC
                                                                                              TGGCGCTGGCCGCGCTCC 441
                                                                                                                                                                                                                                                                                                                                                           CSSSGSCGSCSGGGSSGGGGGGGGGGGSSSSSSSG--SGSCCCGGGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               191 91006 EVRY cedex - France
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism="Homo sapiens"
/mol type="mrNA"
/db_xref="taxon:9606"
/db_xref="taxon:9606"
/clone="CSOCAP004YI20"
/tissue_type="THYMUS"
/clone="Lb="Homo sapiens THYMUS"
/clone="lb="Homo sapiens THYMUS"
/clone="b="top: pCMVSPORT 6; 1st strand cDNA was primed with a NotI-oligo(dT) primer. Five prime end enriched, with a NotI-oligo(dT) primer. Five prime end enriched, double-strand cDNA was digested with Not I and cloned into the Not I and EcoRV sites of the pCMVSPORT 6 vector.
Library was not normalized."
207 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GI:30765470
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 92.6; DB 13; Pred. No. 1.1e-06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 982;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        URL
                                                                                                                                                                    420
                                                                                                                                                                                                          462
                                                                                                                                                                                                                                               360
                                                                                                                                                                                                                                                                                    402
                                                                                                                                                                                                                                                                                                                       300
                                                                                                                                                                                                                                                                                                                                                             342
                                                                                                                                                                                                                                                                                                                                                                                                                                     284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KEYWORDS
SOURCE
                                                                                        Ş
                                                      밁
                                                                                                                                                                á
                                                                                                                                                                                                        당
                                                                                                                                                                                                                                           á
                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                               문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CNS015Y4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches 164;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
448 GTAAAGCCAC
                                                                                                                                                                  328 GGCGCAGGCCCGGGCGACAGCCGAGACGTGGAGCGCCGCCGGCTCGCTGCAGCTCCGGGAC
                                                                                                                                                                                                                                                                                                                       208
                                                                                                                                                                                                                                                                                                                                                                                                                                   733
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              673
                                                                                                                                                                                                                                             268 GCGCGCCCCGGCTCCTTAAAGGCGCGAGCCGAGCGGAGGTGCCTCTGTGGCCGCA
                                                                                                                                                                                                                                                                                  150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            fly), genomic survey sequence.
AL106054
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Web: www.genoscope.cns.fr)

Determination of this BAC-end sequence was carried out as part of collaboration with the European Drosophila Genome Project (EDGP) - http://www.edgp.ebi.ac.uk - This Drosophila melanogaster BAC library (Dros BAC) was made by Alain Billaud at CEPH (Centre d'Etude du Polymorphisme Humain) with funding provided by a MRC project grant. The DNA was prepared from embryos by Alain Bucheton
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Submitted (23-JUL-1999) Genoscope - Centre BP 191 91006 EVRY cedex - FRANCE (E-mail :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Drosophila melanogaster
Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygo
Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha;
Ephydroidea; Drosophilidae; Drosophila
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Drosophila melanogaster genome sur
BACN15E10 of DrosBAC library from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Genoscope.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CNS015Y4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Drosophila melanogaster (fruit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AL106054.1 GI:5619805
                                                                                                                                                                                                                                                                                                                       GMSSGGGSSSSGGGGGGGGGGGGGGCCCCSSSSSSGGSSCCCSCCCCGGSCCCCSSSGCC
                                                                                          VSGGSSGSGGGGGSSGGGGGVGGCGVMGGGGGGGCCCSSGSGGGGGMSGMSNMGGGGG
                                                                                                                                                                                                          GNGGGGGGMVSGGSGGGVVVGGGVMVGGGSMGGGMVGGMAVGGGGGMSCCMGGVVSSSS
                                                                                                                                                                                                                                                                                                                                                           GCAGTTCCCTGGGTGGCCGCCGAGACGCTGGCCCGGGCTGGAGGGATGG---CGGGGCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                   GGGTGGAGGTGCCCGGAGCGTACCCCAGCGCGCGAGTACCTCCCGCTCACACCCTCGGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTGGGCAGCCCCTGGCCTGGCCAGAGGCCGAGAGCCCGCTCGGTGGAGACTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (bases 1 to 1203)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Genevieve Payan. It has been constructed in the vector
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note="end : T7"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /mol_type="genomic DNA"
/db_xref="taxon:7227"
/clone="BACN15E10"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /clone_lib="DrosBAC"
/plasmid="pBeloBAC11"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                organism="Drosophila melanogaster"
                   457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     274 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        19.9%; Score 91; DB 29
38.1%; Pred. No. 2e-06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         84;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 380 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         fly)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DNA linear GSS 26-U
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Drosophila melanogaster
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          29;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         180;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     237 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 1203;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  National de Sequencage segref@genoscope.cns.fr
```

1092 447 1032 387 972 852

207

327 912 267 792 149

```
RESULT 7
BX365176/c
               ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 6
BX374871
LOCUS
                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
KEYWORDS
                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                               atches
                                                                                                                                                                                                                                                                                                                                                                                                                                  Local
                                                                                                                                                                                                                        422
                                                                                                                                                                                                                                                                                              362
                                                                                                                                                                                      157
                                                                                                                                                                                                                                                                                                                                                                         302 AGCGGCGAGGTGCCTCTGTGGCCGCAGGCCGAGGCCCGGGCGACAGCCGAGACGTGGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     162
                                                                                                                                                                                                                                                             86
                                                                                                                                                                                                                                                                                                                                      40
                                                                    BX365176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BX374871 222 bp mRNA linear EST 08-
BX374871 Homo sapiens NEUROBLASTOMA COT 25-NORMALIZED Homo
CDNA clone CSODCO04YA12 5-PRIME, mRNA sequence.
               BX365176
BX365176.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Faraday Avenue Genoscope sequence
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          cgi-bin/cluster.cgi?seq=CSODC004BA06QP1&cluster=7646.r. Contact
Feng Liang Email : fliang@lifetech.com URL :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Email: seqref@genoscope.cns.fr, Web: www.genoscope.cns.fr
Library was constructed by Life Technologies, a division of
Invitrogen. This sequence belongs to sequence cluster 7646.r
more information about this cluster, see
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Genoscope - Centre National de Sequencage
BP 191 91006 EVRY cedex - France
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Li,W.B., Gruber,C., Jessee,J. and Polayes,D. Full-length cDNA libraries and normalization Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BX374871
                                                     clone CS0DI058YA02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Contact: Genoscope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  http://www.genoscope.cns.fr/
                                                                                                                                                                                      GGCGCTGGCCGCGTCGCTCCTGCACG
                                                                                                                                                                                                                GGCGCTGGCCGCGCTCCTGCACG
                                                                                                                                                                                                                                                             GCGCCGGCTCGCTGCAGCTCCGGGACTCAACATGCGCTGCTCGCCGGGAGG-TNCTGGCT
                                                                                                                                                                                                                                                                                                GCGCCGGCTCGCCAGCTCCGGGACTCAACATGCGCTGCTCGCCGGGAGGCGTCTGGCT
                                                                                                                                                                                                                                                                                                                                        ACCGGTCCGGAATTCCCGGGATCGCAGGCGCAGGCCCGGGCGACA - - SGAGACGTGGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGCGCTGGCCGCGTCGCTCCTGCACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (bases 1 to 222)
                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /fulllength.invitrogen.com/
                                                                    1201 bp mRNA linear Homo sapiens PLACENTA COT 25-NORMALIZED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /clone="CSODCO04YA12"
/tissue_type="NEUROBLASTOMA COT 25-NORMALIZED"
/clone_lib="Homo sapiens NEUROBLASTOMA COT 25-NORMALIZED"
/note="Ist strand cDNA was primed with a NotI-oligo(dT)
primer. Five prime end enriched, double-strand cDNA was
grigested with Not I and cloned into the Not I and EcoR V
sites of the pcMVSPORT 6 vector. Library was normalized."
a 62 c 76 g 35 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                21.1%;
87.0%;
                                                   5-PRIME, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Chordata; Craniata; Vertebrata; Euteleostomi; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                Score 96.2; DB 13
Pred. No. 2.9e-07;
                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                    182
                                                                                                                                                                                                                        447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       InVitroGen Corporation 1600 ID: CSODC004BA06QP1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 13;
                                                                                                                                                                                                                                                                                                                                                                                                               15/
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 222;
                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                      Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EST 08-MAY-2003
                                                                                                                                                                                                                                                                                                                                                                                                             ω
••
                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sapiens
                                                                                                                                                                                                                                                             156
                                                                                                                                                                                                                                                                                              421
                                                                                                                                                                                                                                                                                                                                        97
                                                                                                                                                                                                                                                                                                                                                                         361
                                 FOCUS
               DEFINITION
```

```
REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOURCE
ORGANISM
RESULT 8
BX415111
                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   망
                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local S
Matches 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  source
                                                                                                                                                                                                                                                                          392
                                                                                                                                                                                                                                                                                                                                                                   254
                                                                                                                                                                                                                                                                                                                                                                                                                                                       332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        554
                                                                                                                                                                                      194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     198;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cgi-bin/cluster.cgi?seq=CS1AI015ZC02QP1&cluster=4244.f. Contact: Feng Liang Email: fliang@lifetech.com URL: http://fulllength.invitrogen.com/ InVitroGen Corporation 1600 Faraday Avenue Genoscope sequence ID: CS1AI015ZC02QP1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mammalia; Eutheria; Primates; Catarrhini; Hor

(bases 1 to 1201)

Li,W.B., Gruber,C., Jessee,J. and Polayes,D.

Full-length cDNA libraries and normalization
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       http://www.genoscope.cns.fr/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 more information about this cluster,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Library was constructed by Life Technologies, a division of Invitrogen. This sequence belongs to sequence cluster 4244.f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BP 191 91006 EVRY cedex - France
Email: segref@genoscope.cns.fr, \
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Contact: Genoscope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Genoscope - Centre National de Sequencage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                      CAGGCCCGGGCGACAGCCGAGACGTGGAGCGCGCCGGCTCGCTGCAGCTCCGGGACTCAA 391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GSGGGGCGGGCGGCSGCSGTGGGCGGAGAGSCGGRGGCGCGAGCGCGGGGGGGGSTGGGG
                                                                                                                                                                                                                                                                                                                                                                   GCGCCCGGCTCCTTAAAGGCGCGCGAGCCGAGCGGCGAGGTGCCTCTGTGGCCGCAGGCG 331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         фтемаетессованесетьсскае сесебенеть стессестем систем в помера в п
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CATECECTECTCECCEGEAGECETCTGECTGECCTGECCGCCTCGCTCCTGCACGE 448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGGCGGCCGGCGGGGGGGCCCGCGAGCGGGGGGGGSSGGCGSCCARSGGGGGGCSGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /Clone="CODIOLSRAO".
/clone=Type="PLACENTA COT 25-NORMALIZED"
/clone Tib="Homo sapiens PLACENTA COT 25-NORMALIZED"
/clone Tib="Homo sapiens PLACENTA COT 25-NORMALIZED"
/clone Tib="Homo sapiens PLACENTA COT 25-NORMALIZED"
/note="Tib" Homo sapiens primed with a NotI-oligo(dT)
/note="Tib" Homo sapiens was primed with a NotI-oligo(dT)
/note="Tib" Homo sapiens primed with a 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    organism="Homo sapiens"

/mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches 197;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   93;
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Web : www.genoscope.cns.fr
Technologies, a division of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .2e-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           see
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 1201;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ۰,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                       195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
```

BX415111 BX415111 5-PRIME,

982 Homo sapiens THYMUS mRNA sequence.

Homo

mRNA sapiens

linear I

EST 15-MAY-2003 CS0CAP004YI20

Ś

밁 Ś

á

맑

```
REFERENCE
AUTHORS
BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 4
BQ070018
                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches 124;
                                                                                                                                                                                                                                                                                                                                                                                         source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         444 CACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 324 CGCAGGCGCAGGCCCGGGCGACAGCCGAGACGTGGAGCGCGCCGGCTCGCTGCAGCTCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1080 bp mRNA linear EST 02-APR-2002
AGENCOURT_6860390 NIH_MGC_47 Homo sapiens cDNA clone IMAGE:5922336
5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                        http://image.llnl.gov
Plate: LLCM2089 row: b column: 01
High quality sequence stop: 142.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 (bases 1 to 1080)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BQ070018.1 GI:19899064
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CDNA Library Preparation: Rubin Laboratory
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CGCAGGCGCAGGCCCGGCGACAGCCGAGACGTGGAGCGCGCCGGCTCGCTGCAGCTCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
             /tissue_type="neuroblastoma, cell line"
/lab host="DH10B (phage-resistant)"
/clone_lib="NIH MGC 47"
/clone_lib="NIH MGC 47"
/cloned.into EcoRI/KhoI sites using the following 5'
edaptor: GGCACGAG(G). Size-selected >500bp for average
insert size 1.8kb. Library constructed by Ling Hong in
the laboratory of Gerald M. Rubin (University of
California, Berkeley) using ZAP-cDNA synthesis kit
(Stratagene) and Superscript II RT (Life Technologies).
Note: this is a NIH MGC Library."
59 a 286 c 244 g 290 t 1 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              through the I.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5'-GACTAGTTCTAGATCGCGAGCGGCCCT(15)-3'. Size selected :
1 kb for average insert length 1.9 kb. This is a primary library, non-amplified. Library constructed by Life Technologies and donated by J. Lupski, M.D./Ph.D. (Baylc College of Medicine); available through Life
                                                                                                                                                                                                                                                                                             clone="IMAGE:5922336"
                                                                                                                                                                                                                                                                                                                           db xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                            organism="Homo sapiens"
mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                      ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             27.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 124; DB 13
Pred. No. 5e-12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  247 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      212 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               . 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 908;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ь́е
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (Baylor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
```

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 5
BX403124
                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LOCUS
DEFINITION
                                                                         밁
                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    뭉
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                            BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
Matches 118; Conserv
                                                                                                                                              Matches 123;
                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                             source
                                                                                                                                                                   Local Similarity
 103
                                    362 GCGCCGGCTCGCTGCAGCTCCGGGACTCAACATGCGCTGCTCGCCGGGAGGCGTCTGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           322 GCCGCAGGCCCAGGCCCGGGCGAGACAGCCGAGACGTGGAGGCGCCGGCCCGGCTGCCAGCTC
                                                                         43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         μ
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Faraday Avenue Genoscope sequence ID : CS1DC001ZG09QP1.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cgi-bin/cluster.cgi?seq=CS1DC001ZG09QP1&cluster=7646.r. Contact Feng Liang Email : fliang@lifetech.com URL : http://fulllength.invitrogen.com/ InVitroGen Corporation 1600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Email: seqref@genoscope.cns.fr, Web: www.genoscope.cns.fr
Library was constructed by Life Technologies, a division of
Invitrogen. This sequence belongs to sequence cluster 7646.r
more information about this cluster, see
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Contact: Genoscope
Genoscope - Centre National de Sequencage
BP 191 91006 EVRY cedex - France
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Li, W.B., Gruber, C., Jessee, Full-length cDNA libraries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 1034)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BX403124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BX403124 1034 bp mRNA linear ES
BX403124 Homo sapiens NEUROBLASTOMA COT 25-NORMALIZED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          http://www.genoscope.cns.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BX403124.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cDNA clone CS0DC004YA12 5-PRIME; mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens (human)
                                                                                                         AGCGGCGAGGTGCCTCTGTGGCCGCAGGCGCAAGGCCCGAGACAGCCGAGACGTGGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGCAC 125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGCAC 446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCCGCAGGCCCAGGCCGACAGCCGATACGTGGAGCGCGCCGGCTCGCTGCAGCTC
                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                     /tissue_type="NEUROBLASTOMA_COT_25-NORMALIZED"
/clone_Tib="Homo sapiens NEUROBLASTOMA_COT_25-NORMALIZED"
/note="Tits_strand_cDNA_was primed with a NotI-oligo(dT)
primer. Five prime end enriched, double-strand_cDNA_was
primer five prime end cloned into the Not I and EcoR v
sites of the pcMVSPORT 6 vector. Library was normalized."
a 298 c 288 g 218 t 17 others
                                                                                                                                                                                                                                                                                                                                                                     /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="CSODC004YA12"
                                                                                                                                                               22.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             24.9%;
94.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Jessee, J. and Polayes, D.
braries and normalization
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                               Score 101.8; DB Pred. No. 3e-08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 113.8; DB 1
Pred. No. 2.7e-10;
                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                  DB 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 13;
                                                                                                                                              Indels
                                                                                                                                                                                  Length 1034;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1080;
                                                                                                                                              <u>+</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ,.
                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                    421
                                                                         102
                                                                                                           361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         381
161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
```

```
RESULT 2
BQ894356
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                            SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                  COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                     TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
                                                                                          source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                131;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    71
                                                                                                      cDNA Library Preparation: Rubin Laboratory
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MCC clone distribution information can
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
plate: LLCM2532 row: g column: 11
High quality sequence stop: 482.
Location/Qualifiers
                                                                                                                                                                                                                                                                          Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5', mRNA Bequence
BQ894356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BQ894356 1084 bp mRNA linear 1
AGENCOURT_8725920 NIH_MGC_47 Homo sapiens cDNA clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              High quality sequence stop: 404.
                                                                                                                                                                                                                                                                                                                                               Mammalia; Eutheria; Primates; C:
1 (bases 1 to 1084)
NIH-MGC http://mgc.nci.nih.gov/
National Institutes of Health, |
                                                                                                                                                                                                                                                                                                                                                                                                                                                OMO
                                                                                                                                                                                                                                                                                                                                    Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BQ894356.1 GI:22286370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCTCCTGCACG 201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCTCCTGCACG 447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTGTGGCCGCAGGCGCAGGCCGGGCGACAGCCGAGACGTGGAGCGCGCCGGCTCGCTGC 130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         192
                                                                                                                                                                                                                                                                                                                                                                                                                                            sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /tissue_type="neuroblastoma, cell line"
/lab host="DH10B (phage-resistant)"
/clome_lib="NNIH_MGC_47"
/clome_lib="NNIH_MGC_47"
/clome_lib="NNIH_MGC_47"
/clomed.into EcoRI/KhoI sites using the following 5/
adaptor: GGCACGAG(G). Size-selected >500bp for average
insert size 1.8kb. Library constructed by Ling Hong in
the laboratory of Gerald M. Rubin (University of
California, Berkeley) using ZAP-CDNA synthesis kit
(Stratagene) and Superscript II RT (Life Technologies).
Note: this is a NIH_MGC Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                  db_xref="taxon:9606"
                                                                     organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      clone="IMAGE:6377441"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        organism="Homo sapiens"
tissue_type="neuroblastoma,
               clone="IMAGE: 6338722"
                                                                                                                                                                                                                                                                                                                                                                                                       Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Sutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             28.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     xref="taxon:9606"
                                                    type≈"mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 131; DB 13; Pred. No. 3.2e-13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                   Mammalian
cell line"
                                                                                                                                                                                                                                                                                                                                                   Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 1125;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EST: 16-AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IMAGE: 6338722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                  ьe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .
0
```

```
REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 3
BU149265
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM
                                                                                                                                                                                                                                                    source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          319 GTGGCCGCAGGCCCAGGCCCGGGCGACAGCCGAGACGTGGAGCGCGCCCGGCTCGCTGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               129;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    --
                                                                                                                                                                                                                                                                                                                                                               Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Dr. James R. Lupski
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution informat;
                                                                                                                                                                                                                                                                                                         found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov plate: LLAM13593 row: o column: 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EST
                                                                                                                                                                                                                                                                                        High quality sequence stop:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           National
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BU149265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGENCOURT_8443358 Lupski_sympathetic_trunk Homo IMAGE:6192234 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NIH-MGC http://mgc.nci.nih.gov/
National Institutes of Health,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BU149265.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Contact: Robert Strausberg,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TCCTGCACG 129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCCTGCACG 447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GTGGCCGCAGGCGCAGGCCCGGGCGACAGCCGAGACGTGGAGCGCGCCGCCGGCTCGCTGCAG 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (bases 1 to 908)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note="Organ: brain; Vector: pOTB7; Site_1: XhoI; Site_2: ECORI; cDNA made by oligo-dT priming. Directionally cloned into EcoRI/KhoI sites using the following 5' adaptor: GGCACGAG(G). Size-selected > 500bp for average insert size 1.8kb. Library constructed by Ling Hong in the laboratory of Gerald M. Rubin (University of California, Berkeley) using ZAP-cDNA synthesis kit (Stratagene) and Superscript II RT (Life Technologies). Note: this is a NIH_MGC Library."
/clone_lib="Lupski_sympathetic_trunk"
/note="Vector: pCMV-SPORT6 (Life Technologies); Site_1:
Not1; Site_2: Sal1; cDNA made by oligo-dT priming.
Directionally cloned using the following adaptors:
5'-TCGACCCACGCGTCCG-3' and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /lab_host="DH10B (phage-resistant)"
/clone_lib="NIH_MGC_47"
/note="Organ: brain; Vector: pOTB7;
                                                                                            /dev_stage="adult, 16 yr"
/lab_host="DH10B"
                                                                                                                                                                                         /organism="Homo sapiens'
/mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                                 'tissue_type="sympathetic trunk"
                                                                                                                                                       sex="male"
                                                                                                                                                                         clone="IMAGE:6192234"
                                                                                                                                                                                                                                                                      ocation/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GI:22662797
                                                                                                                                                                                                                                                      .908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   28.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 129; DB 13;
Pred. No. 6.9e-13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           806
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                          598.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ph.D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 1084;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             linear
                                                                                                                                                                                                                                                                                                                                                                       information can be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         espiens cDNA clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          378
```

```
Regult
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Title:
Perfect score:
Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          'Local number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OM nucleic -
                                                                                                                                           Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
         113.8
                                                                               Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    nucleic search, using sw model
                                                                           Query
Match Length DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        September 7, 2003, 05:33:14 ; Search time 2268 Seconds (without alignments) 4897.331 Million cell updates/sec
       28.7
28.2
27.1
24.9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       22781392 seqs, 12152238056 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 AGAACGCAAGGGAGAGGTAG.....CTCCTGCACGGTAAAGCCAC 457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-08-956-518A-94
457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GenCore version 5.1.6 Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                          em_gss_phg:*
em_gss_vrl:*
gb_gss1:*
gb_gss2:*
                                                                                                                                                                                                                                                                                                              em_gss_pln:*
em_gss_vrt:*
em_gss_fun:*
em_gss_mam:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               em_estba:*
                                                                                                                                                                                                                                                                                                                                                                                                                                    gb est1: *
gb est2: *
gb htc: *
gb est3: *
gb est4: *
gb est5: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   em_esthum:*
em_estin:*
                                                                                                                                                                                                                                                                      em_gss_pro:
                                                                                                                                                                                                                                                                                                 em_gss_mus: *
                                                                                                                                                                                                                                                                                                                                                                                                        em_estom:*
                                                                                                                                                                                                                                                                                                                                                                                                                      em_estfun:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        n_estov:*
    1125
1084
908
1080
                                                                                                                                                                                                                                                                                                                                                                        n_gss_hum:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            _estro:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     _estmu:*
                                                                              ij
    BU148759
BQ894356
BU149265
BQ070018
                                                                                                                      SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            45562784
BU148759 AGENCOURT
BQ894356 AGENCOURT
BU149265 AGENCOURT
BQ070018 AGENCOURT
                                                                         Description
```

G					ი	G	ი		U		ი	Ω			ი	O	Ċ	a	ი		ი				Ω,			ი			ი							à		
45	44	ω.	4.2	41	40	39	38	37	36	ω 5	4	ω u	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	4	13	12	11	10	9	œ	7	თ	ຫ
80.8	18		٠,	۲	۲	81.4	-	-	H	-	۲	82	'n	82.4	2	2	2	83	Ĺ	w	83.8	4	4	4	4	85	85	85	_	86,2	87	87	88	88.6	0	91	92.6	93	ð	101.8
17.7	.~	`.`	`.`	.~	.~		.7	,	.~	.7	.~	.7	۳.	Ψ.	ω.	·	ω.	œ	.00		œ		æ	œ	8	œ	œ	œ	æ	æ	9	9	9	9	9	9	0	20.4	μ	2
1158	932	942	925	827	857	836	\sim	1061	888	800	776		$\overline{}$	1201	1101	1026	932	811	1065	1050	1201	943	761	924	807	1364		888	855		1198			1023			982	1201	222	1034
29	29	29	29	28	29	28	29	13	29	12	29	13	28	13	29	13	29	12	13	13	9	12	28	13	<u>υ</u>	12	13	12	29	29	2	L.	12	29	φ	29	13	13	13	13
CC251504	CNS0072Q	AG120142	CNS0091P	AZ183795	AG061653	AZ185303	AG159111	BX391246	AG030591	BG780621 .	CNS010RY '	BX403888	AQ893056	BX335523	CNS01523	BU900073	CNS00720	BI956687	BQ681076 ·	BQ716109	AL563250	BG785567	AZ184492	BX442207	BX464554	BM810045	BX349688	BG809572	AG030581	CNS04CNH	CC1 90008	BX403654	BI91789	AG12830	AL530299	CNS015Y	BX41511	BX3651	BX37487	BX403124 ·
CH261	66742 Dros	20142 Pan t	53013 Drosc	183795 SP 1	061653 Pan t	85303 SP 10	59111 Pan t	BX391246	30591 Pan troo	80621	099352	03888	893056	555	19901	20073	66742	56687	0.18	16109	AL563250	85567 SI	Z184492 SI	X442207 B	BX464554 BX464554	6	96	95	Pan	4 6		DIKEA BYADIKEA	17899 60318	128304 Pan troo	0299 AL530299	L106054 Drosoph	X415111 BX41511	65176 BX365	X374871 BX37487	***

ALIGNMENTS

	COMMENT	TITLE	AUTHORS	REFERENCE		ORGANISM	SOURCE	KEYWORDS	VERSION	ACCESSION	DEFINITION	LOCUS	RESULT 1 BU148759
Email: cgapbs-r@mail.nih.gov Tissue Procurement: ATCC CDNA Library Preparation: Rubin Laboratory cDNA Library Preparation: Rubin Laboratory cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Agencourt Bioscience Corporation Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov Plate: LLCM2561 row: d column: 18 High quality sequence start: 54	Unpublished Contact: Robert Strausberg, Ph.D.	National Institutes of Health, Mammalian Gene Collection (MGC)	NIH-MGC http://mgc.nci.nih.gov/.	1 (bases 1 to 1125)	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.	Homo sapiens	Homo sapiens (human)	EST.	BU148759.1 GI:22662291	5', mRNA sequence. BU148759	NIH_MGC_47 Homo sapiens cDNA clone	BU148759 1125 bp mRNA linear EST 03-SEP-2002	

```
BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                           Query Match 20.6%; Score 94; DB 9; Length 1810; Best Local Similarity 100.0%; Pred. No. 0.00019; Matches 94; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sdo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Bource
                                                                                                                                                          354 CGTGGAGCGCGCCGGCTGCCAGCTCCCGGGACTCAACATGCGCTGCTCGCCGGGAGGC 413
                                         414 GTCTGGCTGGCGCTGGCCGCTCCTCCTGCACG 447
61 GTCTGGCTGGCGCTGGCTCGCTGCACG 94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov Series: IRAK Plate: 69 Row: C Column: 18
This clone was selected for full length sequencing because it passed the following selection criteria: matched mRNA gi: 21536283.

Location/Qualifiers
                                                                                                                          CGTGGAGCGCGGCTCGCTGCAGCTCCGGGACTCAACATGCGCTGCTCGCCGGGAGGC 60
                                                                                                                                                                                                                                                                                                                                                                                                         380 a
                                                                                                                                                                                                                                                                                                                                                                                            /codon_start=1
/product="Unknown (protein for MGC:45359)"
/protein_ide"AAH37571.1"
/protein_ide"AAH37571.1"
/db_xref="GI:22902223"
/translation="MQEADISQ1"
MRRRTLYYGLISALALLVELLPADSGEKISLGITVLLSLTVFMLLVAEIM
PATSDSVPLIAQYFASTMIIVGLSVVVTVIVLQYHHHDPDGGRMFKWFRVILLNWCAW
FLRMKRPGEDKVRPACOHKORRCSLASVEMSAVAFPPASNGKLLYIGFRGLDGVHCVP
TPDSGVVCGRWACSFTHDEHLLHGGQPPEGDPDLAKILEEVRYIANFFRCQDESEAVC
SEWKFAACVVDBLCLMAFSVFTIICTIGILMSAPNFVEAVSKDFA"
a 530 c 495 g 405 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism="Homo sapiens"
/mal_type="mRNA"
/mal_type="mRNA"
/db_xref="taxon:9606"
/clone="MGC:45359 IMAGE:5245812"
/clone="MGC:45359 IMAGE:5245812"
/clone=Ib="NHH MGC_121"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ote="Vector: pCMV-SPORT6"
                                                                                                                                                                                                                                              0,
                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                              0;
```

Search completed: September 7, 2003, 14:36:43 Job time: 2504 secs

용 Ś g Ś

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 14
HSARA7A
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TERENCE OTTLE
                                                                                                                                                                                                                                                                                                                                                                      JOURNAL
MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ches 127;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sig_peptide
mat_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                   Peng, X., Katz, M., Gerzanich, V., Anand, R. and Lindstrom, J. Human alpha 7 acetylcholine receptor: cloning of the alpha 7 subunit from the SH-SYSY cell line and determination of pharmacological properties of native receptors and functional alpha 7 homomers expressed in Xenopus occytes
Mol. Pharmacol. 45 (3), 546-554 (1994)
                                                                                                                                                                                                                                                  Medicine, Dept of Neuroscience,
Stemmler Hall, Philadelphia, PA
                                                                                                                                                                                                                                                                  Submitted (04-FEB-1993) M. Katz, Univ of Pennsylvania Medicine, Dept of Neuroscience, 36th & Hamilton Walk,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              neuronal nicotinic acetylcholine receptor alpha-7 subunit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                alpha-7 subunit.
X70297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HSARA7A 2087 bp mRNA linear H.sapiens mRNA for neuronal nicotinic acetylcholine
                                                                                                                                                                                                                                                                                                                Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                           94195283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          X70297.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GECCECAGECECAGECCEGECEACAGECCEAGACETEGAGCECECCEGCTCGCTGCAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CIGCACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTGCACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (bases 1 to 2087)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                           /tissue type="brain.
/clone_Tib="lambda zap II"
product="neuronal nicotinic acetylocholine receptor"
                                                                         /cell_type="neuroblastoma"
/tissue_type="brain"
                                                                                                                                         /db_xref="taxon:9606"
/clone="SHSY3"
                                                                                                                                                                         /organism="Homo sapiens"
/mol_type="mRNA"
                                                                                                                                                                                                                                  Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         73.
139.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GI:496606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /product="nicotinic acetylcholine 1582. .1876
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VQHCKLKFGSWSYGGWSLDLQMQEADISGYIPMGEWDLVGIPGXRSERFYECCKEPYPDVFTTYMRRRTLYYGLNLLIFCVLISALALLVFLLPADSGEKISLGITVLLISLTVFM LLVAEIMPATSDSVPLIAVEATMIIVGLSVVVTVJIVQYHHADPDGGKMFKWTRVILIMWAEIMPATSDSVPLIAVYFACHKKRKRCRCSLALSVEMSAVAPPPASNGNLLYIGFRGLLDGVHCVFTPDSGVVCGRMACSPTHDEHLLHGGQPPEGDPDLAKLLEEVRYIANNFRCQDESBAVCSEMKFAACVVDRLCLMAFSVFTIICTIGILMSAPNFVEAVSKDFA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /translation="MRCSPGGVWLALAASLLHVSLQGEEQRKLYKELVKNYNPLERPVANDSQPLTVYFSLSLLQIMDVDEKNQVLTTNIWLQMSWTDHYLKNYKELVKNYNPLERPV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PDGQIWKPDILLYNSADERFDATFHTNVLVNSSGHCQYLPPGIFKSSCYIDVRWFPFD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                553 c
                                                                                                                   _line="SHSY-5Y"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        27.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         . 1578
                       start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 127; DB 9; Pred. No. 4.2e-09;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            531 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                <u>.</u>.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 1876;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               receptor alpha7 subunit"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRI 01-JUN-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            °;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                    9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60
```

VERSION

KEYWORDS

FEATURES

Sgo

밁 Ś 밁

Ş

ORIGIN

밁 Ş

```
REMARK
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 15
BC037571
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches 146;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              sig_peptide
mat_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         296 GAGCCGAGCGGCGAGGGTGCCTCTGTGGCCGCAGGCGCAGGCCCAGGCCCGACAGCCGAGACAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 356 TGGAGCGCCGCCGCTCCAGCTCCGGGACTCAACATGCGCTGCTCGCCGGGAGGCGT
Contact: nisc_mgc@hlgri.nih.gov
Akhter,N., Ayele,K., Beckstrom-Sternberg,S.M., Benjamin,B.,
Blakesley,R.W., Bouffard,G.G., Breen,K., Brinkley,C., Brooks,S.,
Dietrich,N.L., Grantte,S., Guan,X., Gupta,J., Haghighi,P.,
Hansen,N., Ho,S.-L., Karlins,E., Kwong,P., Laric,P., Legaspi,R.,
Maduro,Q.L., Masiellb,C., Maskeri,B., Mastrian,S.D.,McCloskey,J.(
McDowell,J., Pearson,R., Stantripop,S., Thomas,P.J., Touchman,J.I
Tsurgeon,C., Vogt,J.L., Walker,M.A., Wetherby,K.D., Wiggins,L.,
Young,A., Zhang,L.-H. and Green,E.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             67
                                                                                                                                                                                                                                              NIH-MGC Project URL: http://mgc.nci.nih.gov
Contact: MGC help desk
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Life Technologies, Inc.
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing Center (NISC),
                                                                                                                                                                                                              Gaithersburg, Maryland;
Web site: http://www.nisc.nih.gov/
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Submitted (13-SEP-2002) National Institutes of Health, Mammalian Gene Collection (MGC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BC037571
BC037571.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens, clone MGC:45359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             creecreececreececereerrecreece
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTGGCTGGGCCTGGCGCGCGCGCACG 158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GAGCCGAGCGGCGAGGTGCCTCTGTGGCCGCACG-GCAGGCCCGGGCGACA-CGGAGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGGAGCGCGCCGGCTCCCGGGACTCAACATGCGCTGCTCGCCGGGAGGCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (bases 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /translation="MRCSPGGWEGLASILHVSLQGEFQRKLYKELVKNYNPLERPV ANDSGPLTVYFSLSLLQIMDVDEKNOVLTTNIWLQNSWTDHYLQMNVSEYPGWKTVRF PDGQIMKDGILLYNSADERFDATFHTNVLVNSSGHCQYLDPGIFKSSCYIDVRWFPPP UQGCKLKFGSILLYNSADERFDATFHTNVLVNSSGHCQYLPPGIFKSSCYIDVRWFPPP DVTFTVTMRRRTLYYGLNLLIPCVLISALALLVFLLPADSGEKISLGITVLLSLTVFW LLVAEIMPATSDSVPLLAQYFASTMIVGLSVVVTVJVYLHQYHHDPDGGKMFXWTRVILVAEIMPATSDSVPLLAQYFASTMIVGLSVVTVJVYLYQYHHDPDGGKMFXWTRVILVAEIMPATSDSVPLLAQYFASTMIVGLSVVTVJVJVQYHHDPDGGKMFXWTRVILVAEIMPATSDSVPLLAQYFASTMIVGLSVVTVJVJVAHADPDGSKMFXRVILLAGYFRGLDCHCVPTPDSGVVCGRMACSPTHDEHLLHGGQPPEGDPDLAKILEEVRYIAARFFRCQDESEAVCSEWKFAACVVDRLCLMAFSVFTIICTIGILMSAPNFVEAVSKDFA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              104. .175
176. .1609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /protein_id="CAA49778.1"
/db_xref="GI:496607"
/db_xref="SWISS-PROT:P36544"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /product="unnamed"
601 c 573 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GI:22902222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          to 1810)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           26.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          subunit"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 121.6; | Pred. No. 2.4e 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               bp ткин
39 IMAGE:5245812,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .4e-08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 mRNA,
                                                                                                                                                                                                                                                                                Intramural
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRI 16-SEP-2002 complete cds.
                                                  McCloskey, J.C.,
Touchman, J.W.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ۲.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2
```

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 11
AR282833
                                                                                                                                                                                                                                                                                         RESULT 12
AX719088
                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                     ACCESSION
TRSION
WORDS
                                                                                                                                                                                                                                                                     LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "EATURES
                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Snoor
                                                                                                                                                                                                                 ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches 127;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM
                                                                                                                                         JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                                                      S'UTR
                                                                                                          source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local
                                                                                                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                         441
                                                                                                                                                                                                                                                                                                                                                                                                   381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         441
                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 (bases 1 to 1876)
Elliott, K. J. and Harpold, M.M.
Human neuronal nicotinic acetylcholine receptor compositions
methods employing same
Patent: US 6524789-A 11 25-FEB-2003;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 11 from patent AR282833
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AR282833.1
                                                                                                                              methods employing same Patent: EP 1295945-A 11 26-MAR-2003; MERCK & CO. INC. (US)
                                                                                                                                                                                            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                 Homo sapiens (human)
Homo sapiens
                                                                                                                                                                                                                                                           Sequence 11 from Patent AX719088
                                                                                                                                                                                                                                                                               AX719088
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AR282833
                                                                                                                                                            Human neuronal nictinic acetylcholine receptor compositions and
                                                                                                                                                                      Elliott, K.J. and Harpold, M.M.
                                                                                                                                                                                                                                                AX719088.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                         CIGCACG 447
                                                                                                                                                                                                                                                                                                                                                                               CTGCACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CIGCACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organism="unknown"
553 c 531 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                  Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                    127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          447
                               /codon_start=1
/product="alpha7 human neuronal nicotinic
                                                                                    organism="Homo sapiens"
|mol_type="genomic DNA"
/protein_id="CAD88995.1"
/db_xref="GI:29891592"
                                                                                                                                                                                                                                                GI:29891591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GI:29719625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          27.8%;
                                                      .1581
                                                                           xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 127;
Pred. No.
                                                                                                                                                                                                                                                                     1876 bp
EP1295945.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1876 bp
US 6524789
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        423 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  . 4.2e-09;
ches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 6;
                                                                                                                                                                                                                                                                               DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 1876;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 linear
                                                                                                                                                                                                                                                                               linear
                                 acetylcholine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PAT 10-APR-2003
                                                                                                                                                                                                                                                                                PAT 15-APR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                          60
                                                                                                                                                                                                                                                                                                                                                                                                                                              380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3'UTR
BASE COUNT
ORIGIN
                                                                                                                                                                                           REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                         KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 13
HSU62436
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                          VERSION
                                                                                                                                                                                                                          JOURNAL
MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                               AUTHORS
                                                                                                                                                                                  JOURNAL
```

```
Query Match
Best Local Simi
Matches 127;
                                                                                                                                                                                                                                                                                source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             321 GGCCGCAGGCCCGGGCGCGACAGCCGAGACGTGGAGCGCCGGCTCGCTGCAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                441 CTGCACG 447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ᆫ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 (bases 1 to 1876)
Elliott.K.J., Ellis,S.B., Berckhan,K.J., Urrutia,A.,
Chavez.Noriega,L.E., Johnson,E.C., Velicelebi,G. and Harpold,M.M.
Comparative structure of human neuronal alpha 2-alpha 7 and beta
2-beta 4 nicotinic acetylcholine receptor subunits and functional
expression of the alpha 2, alpha 3, alpha 4, alpha 7, beta 2, and
                                                                                                                                                                                                                                                                                                                   Direct Submission
Submitted (28-JUN-1996) Kathryn J. Elliott,
Inc., 505 Coast Blvd. So., La Jolla, CA 920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               U62436.1 GI:1458119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human nicotinic acetylcholine mRNA, complete cds.
                                                                                                                                                                                                                                                                                                                                                                               Elliott, K.J.
                                                                                                                                                                                                                                                                                                                                                                                                                                         97062879
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HSU62436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CIGCACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (bases 1 to 1876)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4 subunits
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Neurosci. 7 (3), 217-228 (1996)
                                                                                                                                /db xref="taxon:9606"
/clone="KBalpha7.3"
/cell_line="IMN32"
/cell_type="neuroblastoma"
/clone_lib="SIBIA lambda gtl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ANDSQPLTVYFSLSLLQIMDVDEKNQVLTTNIWLQMSWTDHYLQMNVSEYPGVKTVRF
PDGQTMKPDILLYNSADERFDATFHTNVLVNSGHCQYLPFGIFKSSCYIDVRWFPFD
VQHCKLLFGSMSYGGMSLDLQMQBADISGYIFMGEWDLVGIFGKRSEFYECCKEPYP
DVTFTVTMRRRTLLYGGMSLLLLIPCVLISALALLVFLLPADSGEKISLGITVLLSLTVFM
LLVAEIMPATSDSVPLIAQYFASTMIIVGLSVVVTVIVLQYHHHDPDGGKMPKWTRVI
LLNWCAWFLRNKRPGEDKVRPACQHKMRRCSLASVENSAVAPPPASNGNLYIGFRGL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DGVHCVPTPDSGVVCGRMACGPTHDEHLLHGGQPPEGDPDLAKILEEVRYIANRFRCQ
DESEAVCSEMKFAACVVDRLCLMAFSVFTIICTIGILMSAPNFVEAVSKDFA"
                                                                                                                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          127
                                         precursor"
                                                          /codon_start=1
/product="nicotinic acetylcholine
                                                                                                                                                                                                                                      organism="Homo sapiens"
onl_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          translation="MRCSPGGVWLALAASLLHVSLQGEFQRKLYKELVKNYNPLERPV"
/protein_id="AAB40114.1"
/db_xref="GI:1458120"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             27.8%; sc.
100.0%; Pr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       553 c
                                                                                                   .1581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    531 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 127; DB 6; Pred. No. 4.2e-09; 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1876 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ייף mRNA linear
receptor alpha7 subu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       423 t
                                                                                                                                       gt11 library
                                                                                                                                                                                                                                                                                                                     ott, SIBIA Neurosciences,
92037, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 1876;
                                                          receptor alpha7 subunit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    subunit precursor,
                                                                                                                                           #
                                                                                                                                           <u>3</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Euteleostomi; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60
```

```
밁
                                               S
                                                                                                                                                    BASE COUNT
ORIGIN
                                                                                                                                                                                         JOURNAL
FEATURES
                                                                                                                                                                                                                     REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                          DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
AUTHORS
TITLE
         Ś
                                                                    ₽
                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                  RESULT 8
AR071403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL FEATURES
                                                                                                                                                                                                                                                                                                                                                                                           á
                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                         B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LOCUS
DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 7
AR055255
                                                                                                                                                                                                                                                              OURCE
ORGANISM
                                                                                                                                                                                                                                                                                   KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOURCE
                                                                                                                                                                                                                                                                                                                          Snoor
                                                                                                          Query Match
Best Local S
Matches 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               E COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source
           441
                                                 381
                                                                                        321
                                                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                                                                                             441
                                                                                                                                                                                                                                                                                                                                                                                                                                     381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  321 GGCCGCAGGCGCAGGCCCGGGCGACAGCCGAGACGTGGAGCGCGCCGGCTCGCTGCAGCT 380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               al Similarity
                             61
                                                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                    μ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AR055255
Sequence 7 f
AR055255
AR055255.1
                                                                                                                                                                                               l (bases 1 to 1876)
Ellist, S.B. and Harpold, M.
Human neuronal nicotinic acetylcholine
methods employing same
Patent: US 5910582-A 7 08-UN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 (bases 1 to 1876)
Elliott,K.J., Ellis,S.B. and Harpold,M.M.
Human neuronal nicotinic acetylcholine recep
transformed with same DNA and mRNA encoding
Patent: US 5837489-A 7 17-NOV-1998;
Location/Qualifiers
1, .1876
                                                                                                                                                                                                                                                                                                                                                                                                                                                         ш
                                                                                                                                                                                                                                                    Unknown.
Unclassified.
                                                                                                                                                                                                                                                                                                   AR071403
Sequence 7 from patent
AR071403
                                                                                                                                                                                                                                                                       Unknown.
                                                                                                                                                                                                                                                                                           AR071403.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Unknown.
Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Unknown.
                                                                                                                    Similarity
CTGCACG
                             CCGGGACTCAACATGCGCTGCTCGCCGGGAGGCCT
                                                                                      GGCCGCAGGCCCGGGCGACAGCCGAGACGTGGAGCGCGCCGGCTCGCTGCAGCT
                                              GGCCGCAGGCGAGGCCCGGGCGACAGCCGAGACGTGGAGCGCGCCGGCTCGCTGCAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                         CIGCACG 127
                                                                                                                                                                                                                                                                                                                                                                                             CIGCACG 447
                                                                                                                                                                                                                                                                                                                                                                                                               369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 369
                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              27.8%;
llarity 100.0%;
Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                þ
                                                                                                                                                         /organism="unknown"
553 c 530 g
                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="unknown"
553 c 530 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 from
                                                                                                                                                                                                                                                                                          GI:7222291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GI:5980832
                                                                                                                   27.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 patent
                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0,
                                                                                                                  Score 127; DB 6;
Pred. No. 4.2e-09;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 127; DB 6; 1
Pred. No. 4.2e-09;
0; Mismatches 0;
                                                                                                                                                                                                                                                                                                             1876 bp
US 5910582.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1876 bp
US 5837489.
                                                                                                          Mismatches
                                                                                                                                                            423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               423
                                                                                                                                                             ~
                                                                                                                                                                                                                                                                                                                        DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               rt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DNA
                                                                                                                                                                                                                                3
                                                                                                                                                                                                                    receptor compositions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              receptor and cells
                                                                                                                            Length 1876;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 1876;
                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                        linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           linear
                                                                                                                                                           others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PAT
                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            o
;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          29-SEP-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                              440
                                                                 60
                                                                                     380
                             120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
```

```
밁
                 Ş
                                     밁
                                                                                                                   BASE COUNT
ORIGIN
                                                                                                                                                         JOURNAL
FEATURES
                                                                                                                                                                                     REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                            SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                RESULT 10
AR224030
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                   ACCESSION
                                                                                                                                                                                                                                                VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                             문
                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                      뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Sim:
Matches 127;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pocas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
                                                                            Matches
                                                                                     Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM
                                                                                                                                               source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                source
                 381
                                                        321
                                                                                                                                                                                                                                                                                                                                        121
                                                                                                                                                                                                                                                                                                                                                           441
                                                                                                                                                                                                                                                                                                                                                                                                  127;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121 CTGCACG
61
                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                  AR224030
Sequence
AR224030
                                                                                                                                                                                                                                                                                                                                                                                                                      ш
                                                                                                                                               1 (bases 1 to 1876)
Elliot,K.J., Ellis,S.B. and Harpold,
Methods for identifying agonists and
nicotinic acetylcholine receptors
Patent: US 6440681-A 11 27-AUG-2002,
1. .1876
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AR173187
Sequence
AR173187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       methods employing same
methods employing same
Patent: US 6303753.A, 7 16-OCT-2001;
Location/Qualifiers
1. 1876
/organism="unknown"
369 a 553 c 530 g 423
                                                                                                                                                                                                                            Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 (bases 1 to 1876)
Elliott, K.J., Ellis, S.B. and Harpold, M.
Human neuronal nicotinic acetylcholine
                                                                                                                                                                                                                  Unclassified
                                                                                                                                                                                                                                     Unknown.
                                                                                                                                                                                                                                                         AR224030.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unknown
                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unclassified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AR173187.1
           GGCCGCAGGCGCAGGCCCGGGCGACACACCCGAGACGTGGAGCGCCGCCCGGCTCGCTGCAGCT
GGCCGCAGGCGCAGGCCGACAGCCGAGACGTGGAGCGCGCCGGCTCGCTGCAGCT
                                                                                                                                                                                                                                                                                                                                       CTGCACG
                                                                                                                                                                                                                                                                                                                                                          CIGCACG 447
                                                                                                                                                                                                                                                                                                                                                                                                                  GGCCGCAGGCGAGGCCCGGGCGACAGCCGAGACGTGGAGCGCGCCGGCTCGCTGCAGCT
                                                                                                                            369
                                                                          27.8%; Silarity 100.0%; Conservative 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                            B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            7
                                                                                                                                                                                                                                                                             11 from
                                                                                                                         organism="unknown"
553 c 530 g
                                                                                                                                                                                                                                                                                                                                        127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GI:17912678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     27.8%;
100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1876 bp. patent US 6303753.
                                                                                                                                                                                                                                                                            1876 bp
patent US 6440681.
                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                          Score 127; DB 6;
Pred. No. 4.2e-09;
0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 127;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                           423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4.2e-09;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 6,
                                                                                                                           đ
                                                                                                                                                                                                                                                                                      mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DNA
                                                                                                                                                                                              , м.
м.
                                                                                                                                                                                     antagonists
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     receptor compositions
                                                                                             Length 1876;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length
                                                                           Indels
                                                                                                                                                                                                                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                           others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      linear
                                                                                                                                                                                      for
                                                                                                                                                                                                                                                                                      PAT
                                                                           °.
                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                      26-SEP-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      17-DEC-2001
                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    and
120
                                                                                                                                                                                                                                                                                                                                                                                                440
                440
                                     60
                                                        380
                                                                                                                                                                                                                                                                                                                                                                                                                    60
                                                                                                                                                                                                                                                                                                                                                                             120
                                                                                                                                                                                                                                                                                                                                                                                                                                      380
                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
```

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 5
AX346921/c
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KEYWORDS
⊃OURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                           8
                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                   멍
                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                      밁
                                                                                                             Ś
                                                                                                                                       밁
                                                                                                                                                                                                          á
                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                              BASE COUNT
ORIGIN
                  Ş
                                     g
                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VERSION
                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4969
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301
                    421
                                            336
                                                                  361
                                                                                          396
                                                                                                                                       456
                                                                                                                                                              241
                                                                                                                                                                                                              181
                                                                                                                                                                                                                                    576
                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                   636
                                                                                                                                                                                                                                                                                                                                696 AAAACGCAAAAAAAAAAAAACCTAACCTTAAACAACCCCTAACCTAACCAAAAACGCG
                                                                                                                                                                                                                                                                                                                                                                                 310;
                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 1992
AX346921
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Olek,A., Piepenbrock,C. and Berlin,K. Diagnosis of diseases associated with the Patent: WO 0200928-A 1992 03-JAN-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AX346921.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Epigenomics AG (DE)
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AX346921
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  urtificial sequences.
                                                                                                               GAGCGGCGAGGTGCCTCTGTGGCCCCAGGCCCAGGCCCGGGCCGACAGCCGAGACGTGGAG
                                                                                                                                                              GAAAATACCTCCCGCTCACACCTCGAACTACAATTCCCTAAATAACCGCCGAAACGCTAA
                                                                                                                                                                                                                                                GGGAGTACCTCCCGCTCACACCTCGGGCTGCAGTTCCCTGGGTGGCCGCCGAGACGCTGG 180
                                                                                                                                                                                                                                                                                   AAACCGAAAACCCGCTCGATAAAAACTAAAAATAAAAATACCCGAAACGTACCCAACGCC
                                                                                                                                                                                                                                                                                                         AGGCCGAGAGCCCCGCTCGGTGGAGACTGGGGGGTGGAGGTGCCCGGAGCGTACCCAGCGCC
                                                                                                                                                                                                                                                                                                                                                   AGAACGCAAGGGAGAGGTAGACCTTGGCCTTGGCCAGAGACGCCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               rescerrescerescerrirres acestadas 5061
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGGCGCTGGCGCGTCGCTCCTGCACGGTAAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CGCGTCGGTTCGTTGTAGTTTCGGGATTTAATATGCGTTGTTCGTCGGGAGGCGTTTGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  cececceerrecaecreceeeacreaacareaecrecaecreceeeaeeeercreee
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GAGCGGCGAGGTGTTTTTGTGGTCGTAGGCGTAGGTTCGGGCGATAGTCGAGACGTGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GAGCGGCGAGGTGCCTCTGTGGCCGCAGGCGCAGGCCCGGGCGACAGCCGAGACGTGGAG
                                                                                                                                         AAACGCGCGAAAACGAAACGAAAACGCGCGCGCCCGACTCCTTAAAAAACGCGCGAACC
                                                                                                                                                                                      CCCGAACTAAAAAAATAAAAAAACGAAAACGAAAACGAAAACTCGTCACGTAAAA 457
                                                                  cececceerreceaecreceeeaecreaecareceerecreceeeeaecererecee
              TGGCGCTGGCCGCGTCGCTGCACGGTAAAGCCCAC
                                            CGCGCCGACTCGCTACAACTCCGAAACTCAACATACGCTACTCGCCGAAAAAACGTCTAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                         1400
                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             construct
                                                                                                                                                                                                                                                                                                                                                                                                                                      /noTe="chemically treated genomic DNA (Homo 152 c 1205 g 2547 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="synthetic construct,"
/mol_type="genomic DNA"
/db_xref="taxon;32630"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GI:18494807
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .5304
                                                                                                                                                                                                                                                                                                                                                                                         48.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5304 bp I
Patent WO0200928.
                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                         Score 221.8; DB 6;
Pred. No. 1.3e-22;
                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     453
                                                                                                                                                                                                                                                                                                                                                                               147;
240
                    457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 immune
                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PAT 01-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                    sapiens)"
                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5028
                                                                  420
                                                                                                                                                              300
                                                                                                                                                                                                            240
                                                                                                                                                                                                                                    517
                                                                                                                                                                                                                                                                                                         120
                                                                                                                                                                                                                                                                                                                                  637
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4968
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  360
                                                                                                                                         397
                                                                                                                                                                                                                                                                                   577
                                                                                                                                                                                                                                                                                                                                                         60
                                                                                          337
                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                              BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 6
AF486623
                                                                                      Ś
                                                                                                                밁
                      밁
                                        Ś
                                                                  밁
                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gene
                                                                                                                                                                                                                                                                                                                                                                                                                              SGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                      5'UTR
                                            415
                                                                                          355
                                                                                                                                         295
                       128
                                                                   68
                                                                                                                 8
```

```
Query Match
Best Local Similarity
Matches 141; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Submitted (21-FEB-2002) Neuroscience, Oregon Regional Primate
Research Center, 505 NW 185th Ave., Beaverton, OR 97006, USA
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Proskocil, B.J., Sekhon, H.S., Keller Lindstrom, J. and Spindel, E.R. An Intrinsic Non-neuronal Nicotinic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Macaca mulatta nicotinic mRNA, complete cds. .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Eutheria; Primates; Catarrhini; Cercopithe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Macaca mulatta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Macaca mulatta (rhesus monkey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Direct Submiss
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Proskocil,B.J., Sekhon,H.S., Keller,J.A.,
Lindstrom,J. and Spindel,E.R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AF486623.1 GI:29422147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AF486623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Monkey Lung Airway Epithelium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Cercopithecinae; Macaca.
                                                                                                                GTGGAGCGCCGCCCGCTCCGTGCAGCTCCGGGACGCCCCAACATGCGCTGCCTCCCCCGGGAGGCG
                                                                                                                                                                                                       CGAGCCGAGCGAGGTGCCTCTGTGGCCGCAGGCGCAGGCCCGGGGGGACAGCCGAGAC
                          TCTGGCTGGCGCTGGCGCGTCCTGCACG 447
                                                                                      GTGAGGCGCGGCCGGGCAGCTCCGGGACTCAACATGCGCTGCTCGCAGGGAGGCG
                                                                                                                                                                               CGAGCCGAGCCGAGAGGCGGCTCTGTGGCCGCAGGCGCAAGGCCGGGCGACAGCCGATAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (bases 1 to 2107)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (bases 1 to 2107)
                                                                                                                                                                                                                                                                                                                                                                                           447
                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                     /Godon_start=1
/product="nicotinic acetylcholine receptor alpha7"
/product="nicotinic acetylcholine receptor alpha7"
/product="nicotinic acetylcholine receptor alpha7"
/protein_id="AAO84497.1"
/db_xref="GI:2942148"
/db_xref="GI:2942148"
/translation="MRCSQGGVWLALAASLLHVSLQGEFQRKLYKELVKNYNPLERPV
/translation="MRCSQGGVWLALAASLLHVSLQGEFQRKLYKELVKNYNPLERPV
ANDSQPLTVYFSLSLLQIMDVDEKNQVLTTNIWLQMSWTDHYLQWNVSEYPGVKTVRF
PDGQIWKPDILLYNGAADTEHNVLINASSGHCZVLPGIFGKRSEKFYECCKEPVP
OVPFTVTWRRRTLYYGLNLLIPCVLISATALLVFLLPADSGEKISLGITVLLSLTVFM
LLVAEIMPATSDSVPLIAQVFASTMIIVGLSVVTVIVIQYHHHDPDGGKMFKWTRVI
LLNWCAWPLEMKRPGEDKVRPACQHKQRRCSLASVENSAVAPPPASNGNLLYIGFRGL
DGMHCAPTPDSGVVCGRMACSPTHDEHLLHGGQPPEGDPDLAKILEEVRYIANRFRCQ
DESEAVCSEWKFAACVVDRLCLMAFSVFTIICTIGILMSAPNFVEAVSKDFA"
1615
                                                                                                                                                                                                                                                                                                                                                                                      /gene="CHRNA7"
617 c 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism="Macaca mulatta"
/mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 gene="CHRNA7"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            106. .1614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /gene="CHRNA7"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          'gene="CHRNA7"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 db_xref="taxon:9544"
                                                                                                                                                                                                                                                                                           29.3%;
                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                             Score 133.8; DB 9
Pred. No. 4.5e-10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2107 bp
                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    acetylcholine
                                                                                                                                                                                                                                                                                                                                                                                         ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Keller,J.A., Jia,Y.,
                                                                                                                                                                                                                                                                                                                                                                                           466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          mRNA
160
                                                                                                                                                                                                                                                                                                                   DB 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Cholinergic
                                                                                                                                                                                                                                                                             12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A linear PRI
receptor alpha7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Jia,Y.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ertebrata; Euteleostomi;
Cercopithecidae;
                                                                                                                                                                                                                                                                                                                   Length 2107;
                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Signaling System
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Blakely, R.D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Blakely, R.D.,
                                                                                                                                                                                                                                                                          0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (CHRNA7)
                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                    414
                                                                                                                                                                                    67
                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  in
```

```
JOURNAL
MEDLINE
PUBMED
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 3
AF029837
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
VERSION
  밁
                 Ş
                                                                                          BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                        SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                        Query Match
Best Local Sim:
Matches 392;
                                                                                                                                                                                                           TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                      TITLE
                                                                                                                                                                                                                                         AUTHORS
                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                             ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               14436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         14496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  14556
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            14616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     14676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                    μ
                                                                                                                                                                                                                                                                     Moore, T., Jacobs, S., Meriwether, J., Choi, M.J., Kim, E.J., Walton, K., Buiting, K., Davis, A., Breese, C., Freedman, R. and Leonard, S. Genomic organization and partial duplication of the human alpha? neuronal nicotinic acetylcholine receptor gene (CHRNA7) 99000837
                                                                                                                                                                                                                                                                                                                                                                             Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                        AF029837
Homo sapiens alpha 7 neuronal
                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                             AF029837.1
                                                   Similarity
           AGAACGCAAGGGAGAGGCTAGAGCCTGGCCTTGGGCCAGAGGCCCG
AGAACGCAAGGGAGAGGTAGAGCCTGGCCTTGGCCAGAGGCGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGCGCCGGCTGCAGCTCCGGGACTCAACATGCGCTGCTCGCCGGGAGGCGTCTGGC
                                                                                                                                                                                                                                                                                                                                              (bases 1 to 392)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGGCGCTGGCCGCGTCGCTCCTGCACGGTAAAGCCAC 14340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGGCGCTGGCCGCGTCGTCCTGCACGGTAAAGCCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGCGCCGGCTCGCTGCAGCTCCGGGACTCAACATGCGCTGCTCGCCGGGAGGCGTCTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GAGCGGCGAGGTGCCTCTGTGGCCGCAGGCCCAGGCCCGGGCGACAGCCGAGACGTGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GAGCGGCGAGGTGCCTCTGTGGCCGCAGGCCCAGGCCCGGGCGACAGCCGAGACGTGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGGCGCGCGGGGGCGGGGCGGGGGGCGCGCGCCCTTAAAGGCGCGCGAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGGCGCGCGGGGGCGGGCGGGCGCGCGCCCCGGCCTCTTAAAGGCGCGCGAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGGAGTACCTCCCCCTCACACCTCGGGCTGCAGTTCCCTGGGTGGCCGCCGAGACGCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGGAGTACCTCCCGCTCACACCTCGGGCTGCAGTTCCCTGGGTGGCCGCCGAGACGCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGGCCGAGAGCCCGCTCGGTGGAGACTGGGGGGTGGAGGTGCCCCGGAGCGTACCCAGCGCC
                                         85.8%;
ilarity 100.0%;
Conservative
                                                                                             51
                                                                                                                                                                                                                                                                                                                                                                             sapiens
                                                                                           /map="15q14; between D15S1031
/clone="CHRNA7-P"
1. .392.
122 c 180 g 39 t
                                                                                                                                   /organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"
/chromosome="15"
                                                                                                                                                                                                                                                                                                                                                                                                             GI:3757792
                                         0,
                                                  Score 392;
Pred. No.
                                         Mismatches
                                                                                          ω
                                                                                                                                                                                                                                                                                                                                                                                                                                         bp DNA nicotinic
                                                2.8e-46;
                                                            DB 9;
                                                                                                                          and
                                                                                                                                                                                                                                                                                                                                                                                                                                        linear PRI
                                                           Length
                                                                                                                           D15S1360"
                                        Indels
                                                                                                                                                                                                Colorado
                                        0,
                                                                                                                                                                                                                                                                                                                                                                                                                                        I 16-DEC-1998
promoter
                                                                                                                                                                                                                                       Berger, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 14497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          14557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    420
60
                   60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               14377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       14437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   14617
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            14677
                                                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
TITLE
               S
                                      밁
                                                        Ş
                                                                              밁
                                                                                                 Ş
                                                                                                                        밁
                                                                                                                                          8
                                                                                                                                                                B
                                                                                                                                                                                                                                                                                                                                                                                              SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 4
AX346920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                  BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                         Query Match
Best Local S
Matches 369
                                                                                                                                                                                                                                                                                                                                            JOURNAL
                                                                                                                                                                                                                 Local Similarity
4849
                                                                                 4729
                                                                                                                         4669
                                                                                                                                                                  4609
                   241
                                                           181
                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                             61
                                                                                                                                                                                                         369;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                               AX346920.1
                                                                                                                                                                                                                                                            1480
                                                                                                                                                                                                                                                            ρ
```

```
Olek, A., Piepenbrock, C. and Berlin, K. Diagnosis of diseases associated with Patent: WO 0200928-A 1991 03-JAN-2002; Epigenomics AG (DE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        artificial sequences
                                                                                                                         GGGAGTACCTCCCGCTCACACCTCGGGCTGCAGTTCCCTGGGTGGCCGCCGAGACGCTGG
                                                                                                                                                                                                                                                   AGGCGCGCGGGGGCGGGGCGGGGCGCGCGCCCGGCTCCTTAAAAGGCGCGCGAGCC
                                                           AGGCCGAGAGCCCGCTCGGTGGAGACTGGGGGGTGGAGGTGCCCGGAGCGTACCCAGCGCC
                                                                                                                                                                                                                              AGAACGTAAGGGAGAGGTAGAGTTTGGTTTTGGGTAGTTTTTGGTTTAGAGGCGCG
                                           GGGAGTATTTTTCGTTTATATTTCGGGTTGTAGTTTTTTTGGGTGGTCGTCGAGACGTTGG
                                                                                                                                                                 AGGTCGAGAGTTCGTTCGGTGGAGATTGGGGGGTGTGTTCGGAGCGTATTTAGCGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGGAGTACCTCCCGCTCACACCTCGGGCTGCAGTTCCCTGGGTGGCCGCCGAGACGCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CGCGCCGGCTCGCAGCTCCGGGACTCAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGCGCCGGCTCGCTGCAGCTCCGGGACTCAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GAGCGGCGAGGTGCCTCTGTGGCCGCAGGCGCAGGCCCGGGCGACAGCCGAGACGTGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAGCGGCGAGGTGCCTCTGTGGCCGCAGGCCGAGGCCCGGGCGACAGCCGAGACGTGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGGAGTACCTCCGCTCACACCTCGGGCTGCAGTTCCCTGGGTGGCCGACGACGCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGGCCGAGAGCCCCGCTCGGTGGAGACTGGGGGGTGGAGGTGCCCGGAGCGTACCCCAGCGCC
                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                /organism="synthetic construct"
/mol type="genomic DNA"
/db_xref="taxon:32630"
/note="chemically treated genomic
152 c 1219 g 2453 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                 1. .5304
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                        69.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GI:18494806
                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                        Score 318.6; DB 6;
Pred. No. 2.9e-36;
0; Mismatches 84;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           immune
                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                 DNA
                                                                                                                                                                                                                                                                                                                     Length
                                                                                                                                                                                                                                                                                                                                                                                   (Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PAT
                                                                                                                                                                                                                                                                                         <u>,,</u>
                                                                                                                                                                                                                                                                                                                                                                                 sapiens)"
                                                                                                                                                                                                                                                                                         Gaps
            300
                                           4848
                                                                         240
                                                                                                      4788
                                                                                                                                      180
                                                                                                                                                                   4728
                                                                                                                                                                                                                              4668
                                                                                                                                                                                                 120
                                                                                                                                                                                                                                                            60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               120
                                                                                                                                                                                                                                                                                         0
```

```
Ginde, S., Gord, S., Goyette, M., Graham, L., Grand-Pierre, N., Hagos, B., Horton, L., Hulme, W., Iliev, I., Johnson, R., Jones, C., Kamat, A., Karatas, A., Kells, C., LaRocque, K., Lamazares, R., Landers, T., Lehoczky, J., Levine, R., Lindblad-Toh, K., Liu, G., MacLean, C., Macdonald, P., Major, J., Marquis, N., Matthews, C., McCarthy, M., McEwan, P., McKernan, K., Meldrim, J., Meneus, L., Mihova, T., Mlenga, V., Murphy, T., Naylor, J., Muyeen, C., Nicol, R., Norbu, C., Norman, C.H., O'Connor, T., O'Donnell, P., O'Neil, D., Oliver, J., Peterson, K., Phunkhang, P., Pierre, N., Pollara, V., Oliver, J., Pettas, R., Rieback, M., Riley, R., Rise, C., Rogov, P., Roman, J., Rosetti, M., Roy, A., Santos, R., Schauer, S., Schupback, R., Seaman, S., Severy, P., Spencer, B., Stange-Thomann, N., Stojanovic, N., Strauss, N., Tavers, M., Talamas, J., Tesfaye, S., Theodore, J., Topham, K., Travers, M., Travis, N., Trigillo, J., Vassillev, H., Viel, R., Vo, A., Wilson, B., Wu, X., Wyman, D., Ye, W.J., Young, G., Zainoun, J., Zembek, L., Zimmer, A. and Zody, M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Submitted (10-MAY-2002) Whitehead Institute/MIT Center for Genome Research, 320 Charles Street, Cambridge, MA 02141, USA On May 10, 2002 this sequence version replaced gi:18693427. All repeats were identified using RepeatMasker: Smit, A.F.A. & Green, P. (1996-1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Boukhgalter, B., Brown, A., Camarata, J., Campopiano, A., Chang, J., Chazaro, B., Choepel, Y., Colangelo, M., Collins, S., Collymore, A., Cooke, P., DeArellano, K., Dewar, K., Diaz, J.S., Dodge, S., Faro, S., Ferreira, P., Fitzhugh, W., Gage, D., Galagan, J., Gardyna, Ginde, S., Gord, S., Goyette, M., Graham, L., Grand-Pierre, N., Ginde, S., Gord, S., Goyette, M., Graham, L., Grand-Pierre, N.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      http://ftp.genome.washington.edu/RM/RepeatMasker.html
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Contact: sequence_submissions@genome.wi.mit.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Center project name: L10937
Center clone name: 636_P_14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Web site: http://www-seq.wi.mit.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Center code: WIBR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Center: Whitehead Institute/ MIT Center for Genome Research
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /clone="RP11-636P14"
/clone_lib="RPCI-11 Human Male
complement(118. 329)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ---- Genome Center
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
                                                                                                                                                                              note="<30 qual SNGL
                                                                                                                                                                                                                   note="<30 qual SNGL region"
                                                                                                                                                                                                                                                           note="<30 qual SNGL region"
                                                                                                                                                                                                                                                                                                  note="<30 qual SNGL region"
                                                                                                                                                                                                                                                                                                                                                                                 note="<30 qual SNGL region"
                                                                                                                                                                                                                                                                                                                                                                                                                                                        'rpt_family="AluSg"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   'rpt_family="MER20"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             organism="Homo sapiens"
mol_type="genomic DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                       note="<30 qual SNGL region"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         chromosome="15"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Barna, N.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            xref="taxon:9606"
                                                        _family="MER1B"
                                                                                           _family="L1MC1"
                                                                                                                                       _family="L1MEc"
                                                                                                                                                                                                     . 658
                                                                                                                                                                                                                                            .640
                                                                                                                                                                                                                                                                                  .617
                                                                                                                                                                                                                                                                                                                                                                                                    . 508
                    family="L1MC1"
                                                                                                                                                                                                                                                                                                                                          <30 qual SNGL region"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bastien, V., Bloom, T.,
                                                                                                                                                                              region"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Boguslavkiy, L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gardyna, S.,
                      S
                                                              밁
                                                                                                 S
                                                                                                                                           Best Local Similarity
Matches 456; Conserv
                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                                  repeat_region
                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                             repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                     repeat_region
                                                            14796 AGAACGCAAGGGAGAGGTAGAGCCTGGCCTTGGCCACAGAGCCCAGAGGCCGCG 14737
61 AGGCCGAGAGCCCGCTCGGTGGAGACTGGGGGTGGAGGTGCCCGGAGCGTACCCAGCGGC 120
                                                                                     1 AGAACGCAAGGGAGAGGTAGAGCCTGGCCTTGGGCAGCCCCTGGCCTGGCCAGAGGCGCG 60
                                                                                                                                       99.6%;
nilarity 99.8%;
Conservative
                                                                                                                                                                                                                                    /cpt family="HAL1b"
complement(25834. .26046)
/rpt family="""
                                                                                                                                                                                                                        complement (26456. .26763)
                                                                                                                                                                                                                                                                                                                                                                                   complement (24374.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              complement (21844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               complement (21490. .21776)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /rpt_family="MIR3"
complement(11708. .11810)
/rpt_family="MIR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /rpt_family="L1MC1"
complement(6716. .6)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /rpt_family="AluSq/x" 6478. .6708
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           complement (20643. .20885)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 complement (19700. .20197)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       complement (18769
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            complement (18012
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               complement (17870. .18001)
/rpt_family="L1M4"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              dz,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   dz,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           rpt family="(CCCCCG)n"
6447. .16557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1
Tpc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 _famil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        family="L1M4"
. .6942
                                                                                                                                                                                                                                                                                                                                            family="L1MC5"
ement (25000)
                                                                                                                                                                                                                                                                                                                                                                               family="AluSq"
ement(24374
                                                                                                                                                                                                                                                                                                                                                                                                                         family="L1MC5"
ement(24071)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                family="L1ME3"
ement(23000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             family="LIMDa"
ement(22000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           family="LIMC/D"
ement(1050)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     family="L1M4"
ement (1077
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      family="MIR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            family=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            _family="L1MC1"
                                                                                                                                                                                                                          family="HALlb"
ement (2611)
                                                                                                                                                                                                                                                                                                    family="L1MC5"
ement(25007. .25344)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        family="AluSx"
ement(23eff)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  family="L1MDa"
ement(22660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            family="L1MEd"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 family="(A)n"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   family="L1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        family="AluSx"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              family="MLT1C"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     y=" (TA) n"
                                                                                                                                         Score 455.4; DB 9; Pred. No. 4.9e-56; 0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "GC_rich"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .20642)
                                                                                                                                                                                Length 227506;
                                                                                                                                             Indels
                                                                                                                                             0; Gaps
                                                                                                                                                 0
```

FEATURES

source

unsure unsure unsure

repeat_region repeat_region

repeat_region repeat_region

repeat_region

unsure

repeat_region

repeat_region

unsure unsure

note='

COMMENT

```
용
                                                                       á
                                                                                                                       S
                         á
                                                                                                   밁
                                                                                                                                                  밁
                                                                                                                                                                        Ś
                                                                                                                                                                                                 밁
                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                맑
                                                                                                                                                                                                                                                                       ફ
                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                Matches 456;
                                                                                                                                                                                                                                                                                                                                                                                                                                  repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                          repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                 128768
                                                                                                                                                                                                                                                128708
                                                                                                   128888
                                                                                                                                                 128828
                                                                                                                                                                                                                                                                                                128648
                                                                                                                                                                                                                        121
                            361
                                                                                                                          241
                                                                                                                                                                         181
                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                        ٢
                                               GAGCGGCGAGGTGCCTCTGTGGCCGCAGGCGCAGGCCCGGGCGACAGCCGAGACGTGGAG
                                                              AGAACGCAAGGGAGAGGTAGAGCCTGGCCTTGGCAGCCCCTGGCCAGAGGCGCG
                                                                                                                                                                                                                                                                                                               AGAACGCAAGGGAGAGGTAGAGCCTGGCCTTGGGCAGCCCCTGGCCTGGCCAGAGGCGCG
              CGCGCCGGCTCGCTGCAGCTCCGGGACTCAACATGCGCTGCTCGCCGGGAGGCGTCTGGC
                                                                                                             AGGCGCGCGGGGGCGGCGGGCGGGCGCCCCGGCTCCTTAAAGGCGCGCGAGCC
                                                                                                                                                            GGGAGTACCTCCCGCTCACACCTCGGGCTGCAGTTCCCTGGGTGGCCGCCGAGACGCTGG
                                                                                                                                                                                                                                             AGGCCGAGAGCCCGCTCGGTGGAGACTGGGGGGTGGAGGTGCCCGGAGCGTACCCAGCGCC
                                                                                                                                                                                                                                                                AGGCCGAGAGCCCGCTCGGTGGAGACTGGGGGTGGAGGTGCCCGGAGCGTACCCAGCGCC
                                                                                               AGGCGCGCGGGGCGGGGGGGGGGCGCGCCCCGGCTCCTTAAAGGCGCGCGAGCC
                                                                                                                                             GGGAGTACCTCCCCCCCACACCTCGGGCTGCAGTTCCCTGGGTGGCCGCCGAGACGCTGG
                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                         /rpt_family="Charliel"
26534. .26668
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /rpt_family="LIMD
complement(23627.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /rpt_family="LTR12"
complement(22180. ...
                                                                                                                                                                                                                                                                                                                                                                                                                                                          /rpt_family="Aluy"
25916. .26037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           complement (23725.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 complement(19250. .19565)
/rpt_family="LIMC1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /rpt_family="LIMC
complement(19640.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         complement (18855.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /rpt_family="AT_rich"
complement(17414. .17)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ıdı,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ldr/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  complement (17795.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    16903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   complement (15795.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ıdı,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ğ
                                                                                                                                                                                                                                                                                                                                                          99.6%;
                                                                                                                                                                                                                                                                                                                                                                                              _family="Charliel"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           family="LIMCa"
[ement(1666)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            family="AluSx"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  [ement(24781. .24939)
_family="MIR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               family="LIMEC"
ement (2479)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               family="L1MD2"
ement(21607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            family="AluJo"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    family="L1MCa"
1. 16027
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 family="Alu8x"
ement(1770"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              _family="MLT1B-int"
                                                                                                                                                                                                                                                                                                                                                                                                                                             family="MLT1I"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    family="L1MEc"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            family="L1MD2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             family="L1MEc"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      family="L1M4"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            family="L1M4"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   25908
                                                                                                                                                                                                                                                                                                                                               0,
                                                                                                                                                                                                                                                                                                                                           Score 455.4; DB 9; Pred. No. 5.1e-56; 0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .21583)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .19213)
                                                                                                                                                                                                                                                                                                                                                                   Length 203493;
                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                            0; Gaps
                                                                                                                                                                     240
                                                                                                                                                                                                                                                                     120
129067
                      420
                                                                       360
                                                                                                                      300
                                                                                                                                                                                                                    180
                                                                                                                                                                                                                                                                                                                    60
                                               129007
                                                                                              128947
                                                                                                                                              128887
                                                                                                                                                                                             128827
                                                                                                                                                                                                                                                                                             128707
                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
```

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 2
AC079969/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCESSION
                                                                                                                              TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                     CE 3 (bases 1 to 227506)

RS Birren, B., Linton, L., Nusbaum, C., Lander, E., Ali, A., Allen, N., Anderson, S., Barna, N., Bastien, V., Boukhgalter, B., Anderson, S., Barna, N., Bastien, V., Boukhgalter, B., Anderson, S., Barna, N., Chang, J., Chargaro, B., Choepel, Y., Colangelo, M., Collins, S., Collymore, A., Cook, A., Choepel, Y., Colangelo, M., Collins, S., Collymore, A., Cook, A., Choepel, Y., Colangelo, M., Galagan, J., Gardyna, S., Ferreira, P., FitzHugh, W., Gage, D., Galagan, J., Gardyna, S., Ferreira, P., FitzHugh, W., Gage, D., Galagan, J., Gardyna, S., Ginde, S., Gord, S., Goyette, M., Graham, L., Grand-Pierre, N., Hagos, B., Horton, L., Hulme, W., Iliev, I., Johnson, R., Jones, C., Kamat, A., Karatas, A., Kells, C., LaRocque, K., Lamazares, R., Landers, T., Lehoczky, J., Levine, R., Liu, G., MacLean, C., MacChan, P., Martas, A., Kells, C., LaRocque, K., Lamazares, R., Landers, T., Lehoczky, J., Marquis, N., Matthews, C., McCarthy, M., MacChan, P., McCarthy, M., Marthews, C., McCarthy, M., MacChan, P., McCarthy, M., MacChan, P., McCarthy, M., Marthews, C., McCarthy, M., McDwan, P., Whunklang, P., Peierre, N., Pollara, V., Raymond, C., Retta, R., Rieback, M., Riley, R., Ries, C., Rogov, P., Roman, J., Peterson, K., Phunklang, P., Peierre, N., Pollara, V., Raymond, C., Rosetti, M., Roy, A., Santos, R., Schauer, S., Schupback, R., Seaman, S., Severy, P., Spencer, B., Stange-Thomann, N., Stojanovic, N., Seaman, S., Stanoun, J., Zembek, L., Zimmer, A., and Zody, M., J., Ye, W.J., Young, G., Jahoun, J., Zembek, L., Zimmer, A., and Zody, M., J., Ye, W.J., Young, G., Jahoun, J., Zembek, L., Zimmer, A., and Zody, M., J., Ye, W.J., Young, G., Jahoun, J., Zembek, L., Zimmer, A., and Zody, M., J., W., J., J., Lander, J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Birren, B. Linton, L., Nusbaum, C., Lander, E., Abraham, H., Allen, N., Anderson, S., Barna, N., Bastien, V., Beda, F., Boguslavkiy, L., Boukhgalter, B., Brown, A., Burkett, G., Campopiano, A., Castle, A., Cheepel, Y., Colangelo, M., Collins, S., Collymore, A., Cooke, P., DeArellano, K., Dewar, K., Diaz, J.S., Dodge, S., Ferreira, P., Fitzhugh, W., Gage, D., Galagan, J., Gardyna, S., Ginde, S., Goyette, M., Iliev, I., Grand-Pierre, N., Hagos, B., Heaford, A., Horton, L., Iliev, I., Johnson, R., Jones, C., Kann, L., Karates, A., LaRocque, K., Lamazares, R., Landers, T., Lehoczky, J., Levine, R., Lieu, C., Liu, G., Macchanld, P., Marquis, N., McCarthy, M., McEwan, F., McKernan, K., McPheeters, R., Meldrim, J., Meneus, L., Milova, T., Mlenga, V., Morrow, J., Murphy, T., Naylor, J., Norman, C.H., O'Connor, T., O'Donnell, P., O'Nell, D., Olivar, T. M., Ollver, J., Peterson, K., Pierre, N., Pisani, C., Pollara, V., Raymod, C., Rieback, M., Riley, R., Rogov, P., Rothman, D., Roy, A., Santos, R., Schauer, S., Severy, P., Sougnez, C., Spencer, B., Stange-Thomann, N., Stojanovic, N., Strauss, N., Subramanian, A., Talamas, J., Tesfaye, S., Theodore, J., Tirrell, A., Travers, M., Trigillo, J., Voung, G., Zainoun, J., Vo, A., Milson, B., Wu, X., Wyman, D., Ye, W. J., Young, G., Zainoun, J., Direct, Submission, M., Stojanovic, N., Submer, A., and Zody, M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            129068 TGGCGCTGCCGCGCTCCTGCACGGTAAAGCCAC 129104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            421
                                     Submitted (16-FEB-2002) Whitehead Institute/MIT Center Research, 320 Charles Street, Cambridge, MA 02141, USA 4 (bases 1 to 227506)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Submitted (20-SEP-2000) Whitehead Institute/MIT Center for Genome Research, 320 Charles Street, Cambridge, MA 02141, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 227506)
Birren,B., Linton,L., Nusbaum,C. and Lander,E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens chromosome
AC079969
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens chromosome 15, clone RP11-636P14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AC079969.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AC079969
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGGCGCTGGCCGCGTCGCTCCTGCACGGTAAAGCCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (bases 1 to 227506)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            227506 bp
e 15, clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DNA linear PRI
RP11-636P14, complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            457
                                                                                                                              for Genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10-MAY-2002
```

Birren,B.,

Nusbaum, C.,

Lander, E.,

Ali,A., Allen,N.

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Direct Submission

AL Submitted (19-ARR-2000) Whitehead Institute/MIT Center for Genome Research, 320 Charles Street, Cambridge, MA 02141, USA

Research, 320 Charles Street, Cambridge, MA 02141, USA

CB 3 (bases 1 to 203493)

RS Birren,B, Linton,L., Nusbaum,C., Lander,E., Ali,A., Allen,N., Anderson,S., Barna,N., Bastien,V., Boguelavkiy,L., Boukhgalter,B., Anderson,S., Barna,N., Bastien,V., Boguelavkiy,L., Boukhgalter,B., Anderson,S., Garna,A., Camppoiano,A., Chang,J., Chazaro,B., Choepel,Y., Colangelo,M., Collins,S., Collymore,A., Cook,A., Cook,P., Dewartlano,K., Diaz,J.S., Dodge,S., Faro,S., Ferreira,P., Fizhugh,W., Gage,D., Galagan,J., Gardyna,S., Ferreira,P., Fizhugh,W., Gage,D., Galagan,J., Gardyna,S., Gond,S., Govette,M., Graham,L., Grand-Pierre,N., Jones,C., Kamat,A., Karatas,A., Kells,C., Lahcoque,K., Jones,C., Kamat,A., Karatas,A., Kells,C., Lahcoque,K., McCarthy,M., McEwan,P., McKartna,K., McPheeters,R., Meldrim,J., McCarthy,M., McEwan,P., McKarnan,K., McPheeters,R., Meldrim,J., Norbo,C., Norman,C.H., O'Connor,T., O'Donnell,P., O'Neil,D., Oliver,J., Peterson,K., Phunkhang,P., Pierre,N., Pollara,V., Raymond,C., Retta,R., Rieback,M., Riley,R., Rise,C., Rogov,P., Raymond,C., Nosetti,M., Roy,A., Santos,R., Schauer,S., Schauer,S., Schauer,S., Schauer,S., Schauer,S., Schauer,S., Tesfaye,S., Theodore,J., Topham,K., Travers,M., Travis,N., Trigilio,J., Vassiliev,H., Viel,R., Vo,A., Wilson,B., Wu,X., Wyman,D., Ye,W.J., Direct Submission

Mirect Submission

Mark, Stands, A., Walad, J., Zembek,L., Zimmer,A., and Zody,M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Dodge, S., Dowino, M., Doyle, M., Ferreira, P., Fitzhugh, W., Gage, D., Galagan, J., Gardyna, S., Ginde, S., Goyette, M., Graham, L., Grand-Pierre, N., Grant, G., Hagos, B., Heaford, A., Horton, L., Grand-Pierre, N., Grant, G., Hagos, B., Heaford, A., Horton, L., Karatas, A., Howland, J.C., Iliev, I., Johnson, R., Jones, C., Kann, L., Karatas, A., Klein, J., LaRocque, K., Lamazares, R., Landers, T., Lehoczky, J., Levine, R., Lieu, C., Liu, G., Locke, K., Macdonald, P., Marquis, N., McCarthy, M., McEwan, P., McGurk, A., McKernan, K., McPheeters, R., McCarthy, M., McEwan, P., McGurk, A., McKernan, K., McPheeters, R., Meldrim, J., Meneus, L., Mihova, T., Miranda, C., Mlenga, V., Morrow, J., Murphy, T., Naylor, J., Norman, C.H., O'Connor, T., O'Donnell, P., O'Neil, D., Olivar, T.M., Oliver, J., Peterson, K., Pierre, N., Piesani, C., Pollara, V., Raymond, C., Riley, R., Rogov, P., Rothman, D., Sentos, R., Schauer, S., Severy, P., Spencer, B., Stange-Thomann, N., Scolanovic, N., Subramanian, A., Talamas, J., Yessiliev, H., Viel, R., Vo, A., Wilson, B., Wu, X., Wyman, D., Ye, W.J., Nyessiliev, H., Viel, R., Vo, A., Wilson, B., Wu, X., Wyman, D., Ye, W.J., Piyesf, Submission
Hagos, B., Heaford, A., Horton, L., Hulme, W., Illev, I., Johnson, R., Jones, C., Kamat, A., Karatas, A., Kells, C., LaRocque, K., Lamazares, R., Landers, T., Lehoczky, J., Levine, R., Liu, G., MacLean, C., Macdonald, P., Major, J., Marquis, N., Matthews, C., McCarthy, M., McEwan, P., McKernan, K., McPheeters, R., Meldrim, J., McCarthy, M., McEwan, P., McKernan, K., McPheeters, R., Meldrim, J., Nguyen, C., Norbu, C., Norman, C.H., O'Connor, T., O'Donnell, P., O'Neil, D., Oliver, J., Peterson, K., Phunkhang, P., Pierre, N., Pollara, V., Raymond, C., Retta, R., Rieback, M., Riley, R., Rise, C., Rogov, P., Roman, J., Rosetti, M., Roy, A., Santos, R., Schauer, S., Schupback, R., Seaman, S., Severy, P., Spencer, B., Stange-Thomann, N., Stojanovic, N., Strauss, N., Subramanian, A., Talamas, J., Tesfaye, S., Theodore, J., Topham, K., Travers, M., Travis, N., Trajilio, J., Vassiliev, H., Viel, R., Vo, A., Wilson, B., Wu, X., Wyman, D., Ye, W.J., Young, G.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Submitted (09-AUG-2001) Whitehead Institute/MIT Center for Genome Submitted (09-AUG-2001) Whitehead Institute/MIT Center for Genome Research, 320 Charles Street, Cambridge, MA 02141, USA 4 (bases 1 to 20349) Nusbaum, C., Lander, E., Ali, A., Allen, N., Birren, B., Linton, L., Nusbaum, C., Lander, E., Ali, A., Allen, N., Anderson, S., Barna, N., Bastien, V., Boguslavkiy, L., Boukhgalter, B., Anderson, S., Barna, N., Campopiano, A., Chang, J., Chazaro, B., Choepel, Y., Colangelo, M., Collins, S., Collymore, A., Cook, A., Cooke, P., DeArellano, K., Dewar, K., Diaz, J.S., Dodge, S., Faro, S., Ferreira, P., FitzHugh, W., Gage, D., Galagan, J., Gardyna, S., Ginde, S., Goydt, S., Goyette, M., Graham, L., Grand-Pierre, N., Grand-P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Birren, B., Linton, L., Nusbaum, C., Lander, E., Abraham, H., Allen, N., Anderson, S., Baldwin, J., Barna, N., Bastien, V., Beda, F., Boguslavkiy, L., Boukhgalter, B., Brown, A., Burkett, G., Campopiano, A., Castle, A., Cheepel, Y., Colangelo, M., Collins, S., Collymore, A., Cooke, P., DeArellano, K., Dear, K., Diaz, J.S., Collymore, A., Cooke, P., DeArellano, K., Dear, K., Diaz, J.S., Collymore, A., Cooke, P., DeArellano, K., Dear, K., Dear,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (bases 1 to 203493)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              repeat_region
     repeat_region
                                                                                                                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             repeat_region
                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Submitted (11-DEC-2001) Whitehead Institute/MIT Center for Genome Research, 320 Charles Street, Cambridge, MA 02141, USA On Dec 11, 2001 this sequence version replaced gi:15144328. All repeats were identified using RepeatMasker: Smit, A.F.A. & Green, P. (1996-1997) http://ftp.genome.washington.edu/RM/RepeatMasker.html
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Zainoun, J., Zembek, L., Zimmer, A. and Zody, M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Contact: sequence_submissions@genome.wi.mit.edu
------ Project Information
Center project name: L8593
Center clone name: 717_I_24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Center: Whitehead Institute/ MIT Center for Genome Research Center code: WIBR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Web site: http://www-seq.wi.mit.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /rpt_family="MLT1F" 8037. 8151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 complement (9171.
/rpt family="L2"
9644. .9927
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /rpt_family="(TTTA)n"
complement(740. .909)
/rpt_family="MIR"
                                                                                                                 /rpt_:
                                                                                                                                                                                                                   /rpt_f
14727.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /rpt_family="THE1C" 307. .329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ---- Genome Center
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               complement (7460.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    complement (1333.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1. .203493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ,
rpt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /rpt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ,rpt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /mol_type="genomic DN
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  'rpt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /clone="RP11-717124"
/clone_lib="RPCI-11 Human Male BAC"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   map="15"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                    1dz
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        폋
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         rpt_family="MLT1B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      __family="AluSq"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         _family="MIR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       _family="A-rich"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    _family="L1PA16"
Tement(10066. .1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              family="MLT1A2"
lement(6451. .67
                                                                                                                                                                     family="MLT1B-int"
                                                                                                                                                                                                                                                                  family="AluJb"
                                                                                                                                                                                                                                                                                                                                                               _family="(TG)n'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       family="L1PA2"
. . . 12127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             family="AT_rich"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                _family="AluSq"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   _family="MLT1B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    family="Tigger2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        family="L2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    family="AluY"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 family="(TA)n"
                                                                        family="AluY"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ement (5623.
                                                                                                                                                                                                                   .14975
                                                                                                                 .15055
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .9286)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .6762)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .5984)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .7744)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .1651)
```

```
Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OM nucleic -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       rched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             September 7, 2003, 05:26:09; Search time 2500 Seconds (without alignments) 7478.280 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2888711 seqs, 20454813386 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IDENTITY NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-08-956-518A-94
457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GenEmbl: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGAACGCAAGGGAGGTAG.....CTCCTGCACGGTAAAGCCAC 457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GenCore version 5.1.6 Copyright (c) 1993 - 2003 Compugen Ltd.
                                               em_htg_mus:*
em_htg_pln:*
em_htg_rod:*
em_htg_mam:*
em_htg_vrt:*
em_sy:*
                                                                                                                                                                                                                                                                        em om: *
em ov: *
                                                                                                                                                                                                                                                                                                                                                                                                                   gb_sts:*
                                                                                                                                                                                                                                             em_pat:*
                                                                                                                                                                                                                                                                                                                                                                       em_ba:*
                                                                                                                                                                                                                                                                                                                                               em_hum:
                                                                                                                                                                                                                                                                                                                                   em in:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        pat: *
n_htgo_hum:*
n_htgo_mus:*
n_htgo_other:*
                                                                                                                               htg_hum:*
htg_inv:*
htg_other:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                 _ro: *
                                                                                                                                                                                                      sts:*
                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                               fun:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5777422
```

Pred. No. is the number of results predicted by chance to have a

score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

4.4.4	444	3 0 0 3 3 9 8 9	ا دیا دیا دیا	3333		C 225	c 22 23	17 C 20	C 112 12 15 16 16 16 16 16 16 16 16 16 16 16 16 16	10		Result No.
	7		ωω 7		ரம் ஏ	78 77.8 77.4		81.6 81.2 80.2 78.8	2 9 1 1 2 2	133.8 127 127 127 127	18.	0
8 9 0		7111	2000		и по оо о и оо оо о	6.7.7	777	1,777	80.677	27.8 27.8 27.8 27.8	9 9 9 9 9	t ch
CU CU CU	309	2038	105 1130 5979	8728 4945	00010	822	674	139 4153 5568 8176	950887	1876 1876 1876 1876 1876	4 5 6 6 6	eng
φων	11 2 2	2001	2.81	1001	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	122	11 2	1222	N O O O O O	, o o o o o o	, တ ဖ ဖ ဖ	DB .
328 321 081	AC020/38- AC084799 PM7G11B	32417	780	0.00	AC023446 AC093919 AC136100 AC012684	861	02400 00351 M12E5	PM11H12G AP003685 AC120887 AC021929	AX719086 AX719086 HSU62436 HSARA7A BC037571 AC084804	AX346921 AF486623 AR055255 AR071403 AR173187 AR224030	079960	D SU
86 Macaca mu 18 Homo sapi 10 Homo sapi	020/38 HOMO 8ap 084799 Mus musc L685196 Penicil	324177 Danio re 021793 Homo sap	84839 Penici 5061 Oryza s	2856 Homo sapi 3648 Homo sapi 3648 Homo sapi	23446 HOMO Sa 33919 Oryza g 36100 Rattus 12684 Homo sa	024266 Homo s 023212 Homo s 0685189 Penic	24002 Homo s 03518 Oryza 584391 Penic	AL684264 Peni P003685 Oryza C120887 Oryza C021929 Homo	19088 Sequen 19088 Sequen 436 Human ni 297 H.sapien 37571 Homo s 84804 Mus mu	346921 Sequenc 486623 Macaca 055255 Sequenc 071403 Sequenc 173187 Sequenc 224030 Sequenc	058803 Homo sa 079969 Homo sa 029837 Homo sa 346920 Sequenc	scription

AUTHO	AUT		REFERENCE			ORG	SOURCE	KEYWORDS	VERSION	ACCESSION	DEFINITION	Locus	AC058803	RESULT 1	
TOTTON	E	AUTHORS	ENCE			ORGANISM	(F)	RDS	NG	NOIS	ITION		803	μ	
[Innish] ichod	Homo sapiens chromosome 15, clone RP11-717124	Birren, B., Linton, L., Nusbaum, C. and Lander, E.	1 (bases 1 to 203493)	Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;	Homo sapiens	Homo sapiens (human)	HTG.	AC058803.5 GI:17488731	AC058803	Homo sapiens chromosome 15, clone RP11-717I24, complete sequence.	AC058803 203493 bp DNA linear PRI 11-DEC-2001			

ALIGNMENTS

```
Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-08-660-451A-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                       US-08-660-451A-11
Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOPTWARE: FASTSEQ Version 1.5
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/660,4
FILING DATE: June 7, 1996
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION DATA:
APPLICATION UMBER: 08/484,722
FILING DATE: 06/07/95
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MOLECULE TYPE: NAME OF THE PROPERTY OF THE PRO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE CHARACTERISTICS:
LENGTH: 1876 base pair
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELECOMMUNICATION INFORMATION: TELEPHONE: 619-238-0999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ZIP: 92101-2926
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Elliott, Kathryn J.
APPLICANT: Harpold, Michael M.
TITLE OF INVENTION: HUMAN NEUR.
TITLE OF INVENTION: RECEPTOR CONVERSE OF SEQUENCES: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FRAGMENT TYPE:
ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME: Seidman, Stephanie L
REGISTRATION NUMBER: 33,779
REFERENCE/DOCKET NUMBER: 6362-9370B
                                                                                                                                                        LOCATION: 1582...
OTHER INFORMATION:
                                                                                                                                                                                                                                      NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                             LOCATION: 73...1581
OTHER INFORMATION: alpha7 human r
OTHER INFORMATION: acetylcholine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEFAX: 619-238-0062
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OPERATING SYSTEM:
                                                                                                                                                                                                                                                                           OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AME/KEY: Coding Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            POLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ': 1660 Union Street
San Diego
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           cceseactcaacatectrecceseceseacecercrescrescerescerescere
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTGCACG 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTGCACG 447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Application US/08660451A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1876 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       USA
                                                                                                                                                                                                                                                                                                                                                         5'UTR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            linear
                                                                                                                                                                                                                                      3'UTR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IBM Compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Brown, Martin, Haller & McClain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Genomic DNA
                                                                                                                                                                                            ...1876
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HUMAN NEURONAL NICOTINIC ACETYLCHOLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RECEPTOR COMPOSITIONS AND METHODS EMPLOYING SAME
27.8%; Score 127; DB 4; 100.0%; Pred. No. 1.1e-15;
                                                                                                                                                                                                                                                                                                                                                                                                                                       alpha7 human neuronal nicotinic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US/08/660,451A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           08/484,722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             11:
                                    Length 1876;
```

```
ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 7
US-08-318-837-1/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches 127; Conservative
                                                                                                                                                                                                                                                        TELEFAX: (212) 661-8002
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOFTWARE: ASCII
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/318,837
FILING DATE: 13-007-1994
                                                                                                             ANTI-SENSE: NO ORIGINAL SOURCE: ORGANISM: Hum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CLASSIFICATION DATA:
PRIOR APPLICATION NIMBER: PCT/EP 93/01022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE: 30-APR-1992
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION DATA:
APPLICATION NUMBER: 92.401.231.3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CORRESPONDENCE ADDRESS:
ADDRESSEE: BIERMAN AND MUSERLIAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: FRANSEN, LUCIA; DEVOS, KATHLEEN; VAN DE VOORDE, APPLICANT: ANDRE; VAN HEUVERSMYN, HUGO
TITLE OF INVENTION: NEW POLYPEPTIDES AND PEPTIDES, NUCLEIC TITLE OF INVENTION: CODING FOR THEM, AND THEIR USE IN THE TITLE OF INVENTION: IMMUNOLOGY
                             LOCATION: FEATURE:
                                                                                FEATURE:
                                                                                                                                                          MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                          TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                           REGISTRATION NUMBER: 19, REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: PCT/
FILING DATE: 28-APR-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OPERATING SYSTEM:
SOFTWARE: ASCII
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STATE: NEW YORK
                                                                                               TISSUE TYPE:
                                                                                                                                                                                                           STRANDEDNESS:
               NAME/KEY:
                                                               NAME/KEY:
                                                                                                                                                                                            TOPOLOGY:
                                                                                                                                                                                                                                                                                                           TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STREET:
                                                                                                                                                                                                                                            ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            321 GGCCGCAGGCGCAGGCCCGGGCGACAGCCGAGACGTGGAGCGCCGGCTCGCTGCAGCT 380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           441 CTGCACG 447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10016
                                                                                                                                                                                                                           nucleic acid
                                                                                                                                                                                                                                                                                                                                                                          CHARLES A. MUSERLIAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTGCACG 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Application US/08318837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             600 THIRD AVENUE
                                            CDS
1810..1982
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           USA
misc_feature
543
                                                                                                                                                                                             linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IBM PC compatible
SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                             (212)
                                                                                                                                                                NO
                                                                                               Spleen tissue from healthy human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Floppy disk
                                                                                                                                                                           DNA (genomic)
                                                                                                                                                                                                           single
                                                                                                                                                                                                                                                                                                             661-8000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NEW POLYPEPTIDES AND PEPTIDES, NUCLEIC ACID CODING FOR THEM, AND THEIR USE IN THE FIELD OF TUMOR THERAPY
                                                                                                                                                                                                                                                                                                                                     19,683
19,410.007
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ۰,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60
```

밁

121

CTGCACG 127

```
Ş
                                          밁
                                                                  Ś
                                                                                               밁
                                                                                                                                                                                                           ; NAME/KEY:
; LOCATION:
US-09-217-345-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-217-345-7
                                                                                                                                                               Query Match
Best Local Similarity
                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                  INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   itent No.
                                                                                                                                                                                                                                                                                                                                                                                         TELECOMMUNICATION INFORMATION: TELEPHONE: 619-450-8400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: US 08/466,589, FILING DATE: 05-JUN-95
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                  MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 08-MAR-93
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 21-DEC-
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION DATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: I
APPLICANT: I
APPLICANT: I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: Diskett
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQUENCES: 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TILE OF INVENTION: HUMAN NEURONAL NICOTINIC ACETYLCHOLINE SAME
                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: US 08/467,574 FILING DATE: 05-JUN-95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: US, FILING DATE: 21-DEC-98
                                                                                                                                                                                                                                                                               TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME: Seidman, Stephanie L
REGISTRATION NUMBER: 33,77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ Version 1.5
                                                                                                                                                                                                                                                                                          STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                      ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADDRESSEE:
441 CTGCACG 447
                                                                     381
                                                                                                                           321
                                          61
                                                                                               ب
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7, Application US/09217345
). 6303753
                                                                                                                  nucleic acid
EDNESS: both
                                                           ccaeeaacrcaacaracecracroscossassascorcrascossossascorcacecracecracaca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     92037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           La Jolla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ç
                                                                                                                                                                                                                                                                                                                   1876 base pairs
                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                             619-587-5360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Harpold, Michael M.
                                                                                                                                                                                                                                                                               both
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IBM Compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Heller Ehrman White & McAuliffe 50 Executive Square, 7th Floor
                                                                                                                                                                                                                                                                  CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Steven
                                                                                                                                                                 100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Kathryn J.
                                                                                                                                                                               27.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US 08/028,031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US/09/217,345
                                                                                                                                                                                                                                                                                                                                                                                                                              33,779
                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                    24735-9949B
                                                                                                                                                           Score 127; DB 4; 1
Pred. No. 1.1e-15;
                                                                                                                                                 Mismatches
                                                                                         196A6C6C6CCGCTCGCTGCAGCT
                                                                                                                                                                           Length 1876;
                                                                                                                                                 Indels
                                                                                                                                               <u>.</u>
                                                                                                                                              Gaps
                                  120
                                                                                                                    380
                                                                                        60
```

유

321

GGCCGCAGGCCCAGGCCGACAGCCGAGACGTGGAGCGCGCCGGCTCGCTGCAGCT 380

```
멍
     Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-08-487-596-11
                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Patent No.
                                                                                                                                                                                                        NFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS
                                                                                                                                    MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: WO UP FILING DATE: 08-MAR-1994 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                 TELEPHONE: 619-238-0999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                      ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQUENCES:
                   Local Similarity
                                                                         NAME/KEY: CDS
LOCATION: 73..158:
OTHER INFORMATION:
                                                                                                                                                                                                                                                                REFERENCE/DOCKET NUMBER: 630; LECOMMUNICATION .....
                                                                                                                                                           TYPE: nucleic acid
STRANDEDNESS: both
                                                                                                                                                                                                                                                                                             REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: FILING DATE: 07-JUN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDIUM TYPE:
                                                                                                                                                                                          ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121 CTGCACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             San Diego
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CA
                                                                                                                                                                                         1876 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Application US/08487596
                                                                                        CDS
73..1581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1660 Union Street
     Conservative
                                                                                                                                                                                                                                     619-238-0062
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Harpold, Michael M.
VENTION: METHODS FOR IDENTIFYING AGONISTS AND
VENTION: ANTAGONISTS FOR HUMAN NEURONAL
                                                                                                                                                  both
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PatentIn Release #1.0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IBM PC compatible SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Brown, Martin, Haller & McClain
                                                                                                                                                                                                                                                                                                                                      03-APR-1990
                                                                                                                                   CDNA
                                                                                                                                                                                                                                                                                                                                                                             30-NOV-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   07-JUN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Floppy disk
                                                                                                                                                                                                                                                                                                      Stephanie L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Steven B.
                   100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Kathryn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NICOTINIC ACETYLCHOLINE RECEPTORS
                                                                         /product= "ALPHA-7 SUBUNIT"
                                                                                                                                                                                                                                                                                                                                                 US 07/504,455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US 08/149,503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO US94/02447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US/08/487,596
                                                                                                                                                                                                                                                                                                                                                                                            US 07/938,154
                Score 127; DB 4; Pred. No. 1.1e-15;
                                                                                                                                                                                                                                                                              6362-9951
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        <u>.</u>
    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Version #1.25
  Indels
 0;
Gaps
```

```
g
                           Ś
                                                                                                    US-08-700-636-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             뮹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-08-700-636-7
                                                       Matches
                                                                Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
Matches 127; Conserv
                                                                                                                                                                                                                  TELEFAX: 619-546-9392
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                    STRANDEDNESS: 1
TOPOLOGY: both
MOLECULE TYPE: c1
                                                                                                                                                                                                                                                     TELECOMMUNICATION INFORMATION: TELEPHONE: 619-546-4737
                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                          FEATURE:
                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 0
FILING DATE: 08-MAR-1993
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                      CURRENT APPLICATION DATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Harpold, Michael M.

TITLE OF INVENTION: HUMAN NEURONAL NICOTINIC ACETYLCHOLINE
TITLE OF INVENTION: RECEPTOR COMPOSITIONS AND METHODS EMPLOYING SAME
NUMBER OF SEQUENCES: 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ent No.
                                                                                                                  NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STATE: CA
                                                                                                                                                                                                                                                                        REFERENCE/DOCKET NUMBER: P4
                                                                                                                                                                                                                                                                                         NAME: Reiter, Steph
REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: FILING DATE: 16-JUL
                                                                                                                                                                                                                                                                                                                                                                                                                OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0,
                                                                                                                                                                                                                                                                                                                                                                       CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADDRESSEE:
                                                                                                                                                                                                        ENGTH:
                      127;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                321 GGCCGCAGGCGAGGCCGACAGCCGAGACGTGGAGCGCGCCGGCTCGCTGCAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121 CTGCÁCG 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   441 CTGCACG 447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      381

    GGCCGCAGGCGAGACAGCCGAGACGTGGAGACGCGCCGGCTCGCTGCAGCT

                                                                                                                                                                            nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Application US/08700636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2E: Pretty, Schroeder, Brueggemann & Clark
444 South Flower Street, Suite 2000
                                                                                                                                                                                                    1876 base pairs
                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                USA
                                                                                                                CDS
73..1581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                            IBM PC compatible
                                                                                                                                                      CDNA
                                                                                                                                                                                                                                                                                                                                                                                16-JUL-1996
                                                                                                                                                                                                                                                                                                     Stephen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Steven B
                                               27...
100.0%; F1
  3CAGGCCCGGGCGACAGCCGAGACGTGGAGCGCGCCGGCTCGCTGCAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Kathryn J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%;
                                                                                                                                                                                                                                                                                                                                          US 08/028,031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     27.8%;
                                                                                                                                                                                                                                                                                                                                                                                          US/08/700,636
                                                            Score 127; DB 2; 
; Pred. No. 1.1e-15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 127; Db 2,
                                                                                                                                                                                                                                                                               9368
                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                   Version #1.25
                                                 0;
                                                                        Length 1876;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 1876;
                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0,
                      문
                                           Ś
                                                                     밁
                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           믕
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
```

```
US-08-467-574-7
                                                                                                                        Query Match
Best Local Similarity 100.
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Patent No.
                                                                                                                                                                                                                                                                                                              INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                    NAME: Seidman, Stephanie L
REGISTRATION NUMBER: 33,779
REFERENCE/DOCKET NUMBER: 63
TELECOMMUNICATION INFORMATION:
TELEPHONE: 619-238-0999
                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: US 0
FILING DATE: March 8, 19
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                   FEATURE:
                                                                                                                                                                                                                                             MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ Version 1.5
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ZIP: 92101-2926
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IITLE OF INVENTION:
TITLE OF INVENTION:
NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Elliot
APPLICANT: Ellis,
APPLICANT: Harpol
                                                                                                                                                                                                     NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STREET: 1500
CITY: San Diego
                                                                                                                                                                                                                                                                     STRANDEDNESS:
                                                                                                                                                                                                                                                              TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: US/08 FILING DATE: June 5, 1995 CLASSIFICATION: 536
                                                                                                                                                                                                                                                                                                    ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADDRESSEE:
                                                   381
                                                                                                    321 GGCCGCAGGCGCAGGCCGACAGCCGAGACGTGGAGCGCGCCGCCTCGCTGCAGCT
                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                    nucleic acid
CTGCACG 447
                                             CTGCACG 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTGCACG 447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Application US/08467574
                                                                                                                                                                                                                                                                                                  1876 base
                                                                                                                                                                                                                                                                                                                                                         619-238-0062
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1660 Union Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ellis, Steven B.
Harpold, Michael M.
                                                                                                                                                                                                                                                           poth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            IBM Compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Brown, Martin,
                                                                                                                                                                                                                                               CDNA
                                                                                                                                                                                                                                                                        both
                                                                                                                                            27.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Kathryn J.
                                                                                                                                                                                                                                                                                                 pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HUMAN NEURONAL NICOTINIC ACETYLCHOLINE RECEPTOR COMPOSITIONS AND METHODS EMPLOYING SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US 08/028,031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US/08/467,574
                                                                                                                                                                                                                                                                                                                                                                                                                                                      1993
                                                                                                                                  0
                                                                                                                                            Score 127; DB 3; I
; Pred. No. 1.1e-15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Haller & McClaim
                                                                                                                                Mismatches
                                                                                                                                0; Indels
                                                                                                                                                         Length 1876;
                                                                                                                               0
                                                                                                                            Gaps
                     120
                                                                                                    380
                                                                          60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     120
                                                                                                                             0
```

```
Minimum
Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Title:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   I number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              贸贸
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           seq length: 0 seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-08-956-518A-94
457
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Match Length DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         569978 seqs, 220691566 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IDENTITY_NUC Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 AGAACGCAAGGGAGAGGTAG.....CTCCTGCACGGTAAAGCCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      September 7, 2003, 08:56:10; Search time 68 Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Issued_Patents_NA:*

1: /cgn2_6/ptodata/2/ina/5B_COMB.seq:*

2: /cgn2_6/ptodata/2/ina/6B_COMB.seq:*

3: /cgn2_6/ptodata/2/ina/6B_COMB.seq:*

4: /cgn2_6/ptodata/2/ina/PCTUS_COMB.seq:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                 4403765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   _6/ptodata/2/ina/PCTUS_COMB.seq:*
_6/ptodata/2/ina/backfTles1.seq:*
                                                                                                                               US-08-466-589-7
US-08-470-636-7
US-08-467-574-7
US-09-217-345-7
US-09-8-660-451A-11
US-08-18-837-1
US-09-165-264-13
US-09-165-264-14
US-09-165-264-14
US-09-165-264-11
                                                                                                US-09-103-840A-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (without alignments)
2966.354 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Description
                                                                                                                                                                    Sequence
Sequence
                                                                                                                                                                                                                                                                                                    Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                              Sequence
Sequence
Sequence
                   Sequence
Sequence
                                                                                                                 Sequence
Sequence
                                                                                                                                                                                                                                               Sequence
Sequence
                                                                                                                                                                                                       Sequence
                                                                            Sequence
                                                                                                                                                      Sequence
                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                Sequence
Sequence
                                     1, Appli
13, Appli
8, Appli
8, Appli
17, Appli
17, Appli
11, Appli
12, Appli
11, Appli
11, Appli
11, Appli
11, Appli
11, Appli
12, Appli
12, Appli
13, Appli
14, Appli
15, Appli
16, Appli
```

	۵	۵				O	a	O	Ω	Ω	a	Ω	Ω			Ω	a	Ω
	4.	4.	4.	4.	4	4.	w				35			ω	w	<u>.</u>		2
	U1	44	w	2	<u> </u>	0	Φ								-	0	Ψ	ω
	50.4	50.4	50.8	50.8	51.4	51.8	51.8	51.8	51.8	51.8	52.4	52.4	52.4	52.4	53	53	53	53
		_	_	_		_	_									_	_	
٠	11.0	1.0	1.1	F.1	1.2	11.3	11.3	11.3	11.3	1.3	11.5	1.5	1.5	11.5	1.6	1.6	1.6	1.6
	12	12	4.	4	40	4411529	44	44	44	44	4403765	72	52	7	12001	4257	4257	42
	92	92	07	9	4060	529	4403	4403	4403	4403	765	7218	5228	02	01	57	57	57
	4.	w	4	4	⊢	w	Ŋ	w ·		N	w	μ	4	ш		w	ω	N
	US-09-283-471A-37	US-08-483-533-37	US-09-072-596-168	US-09-056-556-173	US-08-308-949A-1	US-09-103-840A-1	PCT-US93-02147A-	US-09-236-503-1	US-08-447-642-1	US-08-284-941-1	US-09-103-840A-2	US-08-232-463-14	US-09-428-711A-15	US-08-458-568A-3	US-08-458-568A-1	US-08-843-659-1	US-09-259-821A-1	US-08-690-473-1
	-283	-483	-073	-056	-308	9-10	IS93.	-236	-44	-284	9-1	-23	-428	-458	-458	-843	-259	-690
	3-47	3-53	2-59	5.55	3-94	3-8	-021	5-50	7-64	1-94	3-8	2-46	3-71	3-56	3-56	3-65	-82	-47
	1A-3	3-37	6-16	6-17	9A-1	40A-	47A-	3-1	2-1	1-1	40A-	3-14	1A-1	8A-3	8A-1	9-1	1A-1	3-1
	7		œ	ω		1	_				N		ហ		1			
	S	Ņ	S	Ń	S		ģ	ທ	ģ	Ñ		ά	Ś	ω	ç	Ś	Ś	က္ခ
	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence 1,	Sequence 1,	Sequence 1,	Sequence	Sequence 2	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence
	nce	nce	nce	nce		ence	nce	nce	nce	nce	ence	nce	nce	nce	nce	nce	nce	nce
	37,	37,	168	173,	<u>, , , , , , , , , , , , , , , , , , , </u>	,	-			,-	N	14,	15,	W	11,	-	<u> </u>	<u>د بر</u>
	Apr	Appl	168, App	, Ap	Appl i	Appl	App1	Appl	Appli	Appli	, Appli	App	App	Appl	App	Appl	Appl	Appl
	7	ĭ	ğ	ğ	μ.	11	۳	<u>.</u>	μ.	-	11	ř	1	į.	ĭ	, <u>j.</u> .	. j.	. j. .

ALIGNMENTS

```
US-08-466-589-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 7
Patent No.
                                                                                                                                                                                                                                                         APPLICATION NUMBER: US/08/466,589
FILING DATE: June 5, 1995
CLASSIFICATION: 536
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/028,031
FILING DATE: March 8, 1993
ATTORNEY/AGENT INFORMATION:
NAME: Seidman, Stephanie L
REGISTRATION NUMBER: 33,779
REFERENCE/DOCKET NUMBER: 6362-9950
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
                                                                                                                                             INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOFTWARE: FastSEQ Version 1.5
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER READABLE FORM:
MEDIUM TYPE: Diskett
                                                                                                                                                                                                                        TELEPHONE: 619-238-0999
                                      FEATURE:
                                                        MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQUENCES:
NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PPLICANT: Elliot, Kathryn J.

PPLICANT: Ellis, Steven B.

PPLICANT: Harpold, Michael M.

ITLE OF INVENTION: HUMAN NEURONAL NICOTINIC ACETYLCHOLINE

ITLE OF INVENTION: RECEPTOR COMPOSITIONS AND METHODS EMPLOYING SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER: IBM CO
OPERATING SYSTEM:
                                                                                          STRANDEDNESS:
                                                                                                          TYPE: nucleic acid
                                                                                                                                                                                                       TELEFAX: 619-238-0062
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADDRESSEE:
                                                                           IOPOLOGY:
                                                                                                                                 ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 7, Application US/08466589
5. 5837489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     92101-2926
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           San Diego
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CA
                                                                                                                                 1876 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1660 Union Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     USA
CDS
73..1581
                                                                           poth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IBM Compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Brown, Martin, Haller & McClaim
                                                        CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Diskette
                                                                                          both
```